



Voyage SS05-2007

Exploring and characterising marine ecosystems of the NW Region. Characterising the benthic biogeography of the deep continental shelf and slope in Australia's North Western Region (NWR), with emphasis on the processes maintaining (and threatening) biodiversity, and support for implementing the NW Regional Marine Plan and Commonwealth Marine Protected Areas.

Dr Alan Williams and Dr Rudy Kloser, CSIRO (Co-Chief Scientists)

Our overall aims are, to provide data on the distribution of deep seabed habitats and fauna:

- That are amenable to scientific hypothesis testing;
- That can be immediately applied to marine resource management processes;
- That enable strategic development of tools and techniques for understanding the processes that maintain deep sea biodiversity.

This work supports the process of NWR Estate inventory and management performance assessment. Data collected at scientific reference sites, from potential MPA areas, can be re-visited for monitoring purposes in the future. This will improve the potential for successful management.

On analysis of our samples, we expect significant discoveries of new fauna.

At the highest level, samples are allocated to enable comparison of the provincial benthic bioregions of the NWR. Where possible, sampling targeted sites that may become candidate sites for MPAs, or are already conserved or suited to the establishment of scientific reference sites, and that demonstrate the different outcomes from alternative conservation strategies.

The overarching project addresses five primary objectives:

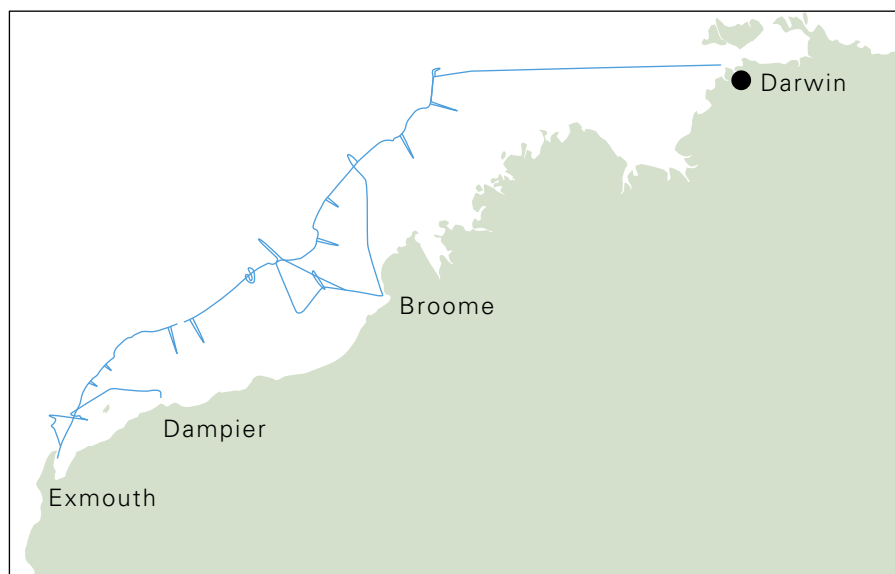
1. Test hypotheses on the evolution and biogeography of Australia's biodiversity relating to species composition, distribution patterns and taxonomic surrogacy, and whether or not the NWR may be a biodiversity hotspot;
2. Test the use of fine and broad scale spatial patterns of biodiversity in determining the physical (and possibly biological) processes maintaining species boundaries;
3. Collect and identify biological specimens from major benthic invertebrate taxa and fishes for the BarCode of Life program;

4. Document the benthic biodiversity in areas of high topographic complexity that could form the focus of future MPA areas in the NWR;
5. Validate, and support refinement of a marine bioregionalisation of the NWR during the development of the NW Regional Marine Plan by the National Oceans Office.

Itinerary

Departed Dampier 19:00 hrs
Thursday 7th June 2007

Arrived Darwin 08:00 hrs
Monday 9th July 2007



> SS05-2007 voyage track