Expedition Log for IODP Expedition 325
Week 1
Great Barrier Reef Environmental Changes

15th February 2010

Sophie Green, Trainee Staff Scientist gives us an introduction to the Expedition

Welcome to IODP Expedition 325, a scientific drilling operation targeting drowned fossil coral reefs to the seaward side of the modern day Great Barrier Reef (GBR). Our home for the next 6 weeks is the *Greatship Maya,* seen below.

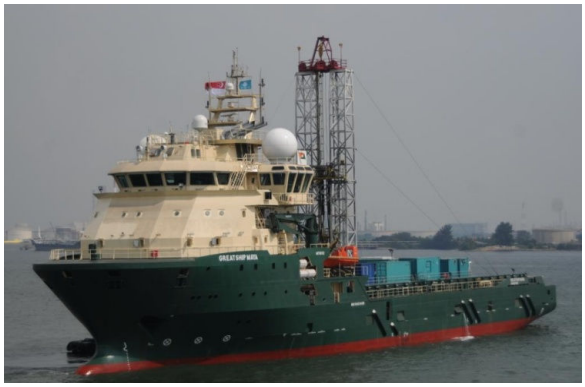


Image courtesy of Bluestone Offshore Pte Ltd.

The GBR is the earth's largest epicontinental reef system extending 2000km NW – SE along the NE Queensland Coast. Despite the current significance of the GBR, relatively little is known of its origin and evolution. However, fossil corals provide excellent records of past environmental conditions which in turn can enhance scientific understanding of how the reef may respond to future perturbations in sea levels, sea surface temperatures and pH of the water to name but a few. They will also help us understand the history behind current climatic fluctuations experienced in tropical regions, such as El Nino.

On board are a team of drilling engineers, ship crew, scientists and technicians, who work together to recover, record, analyse and store sediment and fossil coral cores collected from below the sea bed.

My role in this Expedition is as a Trainee Staff Scientist, working closely with the Staff Scientist, Carol Cotterill to co-ordinate and assist the scientists on board, and to help them document the results of their scientific analyses. Carol and I will use this log to keep you updated about life on board the *Greatship Maya*. We'll invite representatives from different groups to provide some descriptions of their specialist area of work and keep you updated on how we are progressing. For this first entry we will give you a tour of the ship and let you see what living and working conditions are like offshore.

Most of us are sharing 2 person cabins but working opposite 12 hour shifts so everyone gets some quiet time! Below is a photo of a cabin, not exactly spacious but has all the most important things after a long shift!

S_Green@ECORD_IODP

For meal times we congregate in the Mess, where a range of meals are offered 4 times a day. Due to the shift patterns opposite shifts eat breakfast and dinner at the same time so the catering crew work hard to make sure there is something for everyone. Off shift there is also a Day Room to relax in. We also use this room for meetings and post a daily schedule and any other important notices in here.

C_Cotterill@ECORD_IODP:
The day room

S_Green@ECORD_IODP:
The Mess.

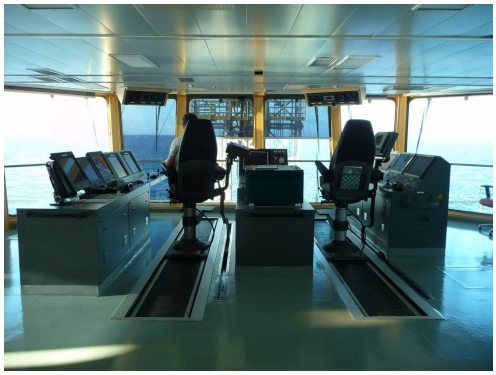
When it's time to start work we swap shorts and flip flops for steel toe boots, hard hats and overalls and head out to the drilling deck. Surrounding the drilling area, there are a number of containers which house the scientists, engineers and technicians. After core arrives on deck it makes a journey around these containers as the different groups carry out sampling and analysis.

C_Cotterill@ECORD_IODP: The drill, the floor and two of the ESO containers at night

C_Cotterill@ECORD_IODP: Positioning of MSCL Lab, Core Curation, Science Container and Refrigerated Container (Reefer) looking towards the drill floor

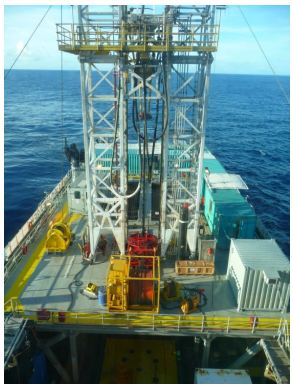
Whilst we are busy down on the main deck and drill floor, the vessel's Dynamic Positioning (DP) system, other shipping traffic and weather conditions – in fact anything that might affect our coring operations – are monitored from the bridge.

C_Cotterill@ECORD_IODP: View of the forward facing bridge used when in transit.



C_Cotterill@ECORD_IODP: View of the aft facing bridge used when coring operations are taking place.

You get quite a good view from up here of the drill floor and operations – plus it is air conditioned!



C_Cotterill@ECORD_IODP: View of the drill floor and ESO containers from the bridge