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Education and Outreach

Neville Exon

Education

ECORD Distinguished Lecturers

In 2009, three ECORD (European Consortium for Ocean Research Drilling) Distinguished Lecturers came to Australia and New Zealand under a joint funding arrangement, and gave well-attended talks at various venues. We would like to express our gratitude to ECORD for their support.

Professor Peter Clift of the Department of Geology & Petroleum Geology, University of Aberdeen, gave talks in March at the universities of Sydney, Melbourne and Queensland. The talk was entitled: 'Tibet, the Himalaya and the Development of the Asian Monsoon: A chicken and egg problem for the IODP'.

Professor R. John Parkes, School of Earth and Ocean Science, Cardiff University, gave talks in August at the Australian Microbiological Society Conference and CSIRO in Perth, at the ANU and the universities of Adelaide, Melbourne, Queensland, Waikato and at Victoria University in Wellington. The talk was entitled: 'The prokaryotes and their activities and habitats in sub-seafloor sediments'.

Professor Achim Kopf of the MARUM Research Centre, University of Bremen, gave talks in November to the University of Melbourne and The Australian National University (ANU). The talk was entitled: 'Subduction mega-earthquakes and other geohazards: IODP NanTroSEIZE as a type example for complex scientific drilling'.

IODP Distinguished Lecturer

Professor Ted Moore of the Department of Geological Sciences, University of Michigan, gave two talks at ANU in 2009, and his first visit was co-funded by IODP. His first very well attended public talk in May was entitled: 'Messages from the Past: The warm Earth we know'. His second talk in August was entitled: 'The Sub Seafloor Ocean: A Voyage of Discovery based largely on Ocean Drilling'.

General outreach

Outreach activities remain central to our mission. In both 2012 and 2013, we funded 20 university undergraduate students to attend an ANZIC Marine Geoscience Masterclass in Perth, with the aim of inspiring the next generation of bright young scientists to work in this exciting area of research. Their feedback was very positive.

Partly in order to gauge the level of knowledge that academia, industry and government had regarding the IODP, the ANZIC Governing Council set up a cost-benefit analysis in late 2012, conducted under contract by the Allen Consulting Group and led by the highly experienced consultant Grahame Cook. The findings of this analysis are outlined in Chapter 12.

As the result of this study, in April 2013, the governing council decided to hire Grahame Cook to proceed with the initial stage of a long-term communication strategy designed to make government more aware of the activities and importance of the IODP. In the initial phase, he held very useful meetings with Dr Robert Porteous (Head of Research and Science Division, Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSTRE)) and Ms Patricia Kelly (Deputy Secretary, DIICCSTRE). In addition, by casting the net more broadly, constructive discussions were held, jointly with Neville Exon, with officers in the Climate Science and Adaptation Division of DIICCSTRE, Department of Foreign Affairs and Trade (DFAT) and Department of

the Prime Minister and Cabinet. At DFAT's suggestion, contact was also made with officers in the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC).

These discussions confirmed that the level of awareness about IODP and its value to Australia among policy departments was quite low. Despite this, when departmental officers were briefed, there was a great deal of interest in and support for IODP. Officers in all the departments responded positively in seeking to understand the program better and its relevance to their ongoing and emerging areas of investigation. On this basis, the council decided to continue these activities in following years, with Grahame Cook and Neville Exon working as a team, with excellent results.

Port calls

There were port calls with associated ship visits and publicity in Townsville (November 2009), Wellington (January 2010), Hobart (March 2010), and Auckland (December 2010) by *JOIDES Resolution*, and in Townsville (February 2010) by *Greatship Maya*. All port calls drew numerous VIPs and generated favourable press coverage. The Hobart port call had the highest profile visitor, the Australian Minister for Innovation, Industry, Science and Research, the Honourable Kim Carr.

Townsville *JOIDES Resolution* port call before Canterbury Basin Expedition 317, November 2009

The *JOIDES Resolution* docked in Townsville from 4 to 6 November, with a press conference aboard the ship early on Friday 6 November. The ship was leaving Townsville for a two-month expedition to drill the Canterbury Basin east of New Zealand's South Island. This expedition investigated the relative importance of global climate change versus local tectonic forces on changing sea level and sedimentary processes during the last 30 million years. This sedimentary basin is a good place to investigate past global sea-level changes, which have frequently amounted to ~100 m. An understanding of past sea-level changes helps geologists to better interpret sedimentary strata around the world, which is important for resource assessment.

Neville Exon and Sarah Howgego from the ANZIC IODP Office in Canberra flew to Townsville for the occasion, and for the associated public relations exercises, including a number of ship tours. Jim O'Brien of James Cook University (JCU) was a marvellous help with public relations, and the various media releases came out from JCU. On Friday 6 November, we had a press conference and tour aboard the ship at which the speakers were David Divins of Ocean Leadership, introducing the ship; Neville Exon, introducing ANZIC; the local federal Member of Parliament, James Bidgood; Will Sager, Shatsky Rise Expedition 324 co-chief scientist, who was coming off the ship; Craig Fulthorpe, Canterbury Basin Expedition co-chief scientist; and Bob Carter of JCU and Simon George of Macquarie University, Australian Canterbury Basin expeditioners.

Other VIPs attending the event included Dr Ian Poiner, CEO of the Australian Institute of Marine Science (AIMS); Professor Bill Collins from JCU; and Dr Kate Wilson, Chair of the ANZIC Governing Council. All were very impressed with the ship and its program. There were about 15 print, radio and TV journalists aboard, who produced mostly local coverage of the event. Channel 9 filmed the activity, and there was online coverage from the ABC. It was a great opportunity for us to see the wonderful new science facilities installed on the ship in Singapore as part of a US\$120 million refit.

On Thursday and Friday, another 100 or so invitees toured the ship, including AIMS and JCU staff, JCU students, and high school students from Calvary Christian College and The Cathedral School. Sarah Howgego had made the arrangements on land with JCU help, and Sarah Saunders (Ocean Leadership) organised the excellent tours aboard ship. David Murphy from Queensland University of Technology was a superb tour guide after taking part in the previous Shatsky Rise expedition.

Wellington *JOIDES Resolution* port call between Canterbury (317) and Wilkes Land (318) Expeditions, January 2010

GNS Science and Victoria University of Wellington hosted the Wellington port call of the *JOIDES Resolution* in January, between the Canterbury Basin and Wilkes Land expeditions. Around 100 VIPs, scientists, petroleum geologists and university students toured the ship and attended lunchtime and evening talks. Twenty high school students participated in a holiday program centred around the *JOIDES Resolution*

visit that included a ship tour and collection and analysis of a gravity core from Wellington Harbour. All events proved very successful, had good media coverage (national TV and radio and, Wellington newspapers) and were well-attended by senior representatives from government agencies, research institutes and universities.

Townsville *Greatship Maya* port call before Great Barrier Reef Environmental Change Expedition 325, February 2010

In early February 2010, the 93 m long *Greatship Maya* (brand new from a Singapore dockyard) sailed from Townsville to drill short core holes in the deep-water terraces of the ancient Great Barrier Reef to study environmental changes in the last 30,000 years. This was an alternative platform expedition supported by ECORD. Jody Webster of the University of Sydney and formerly of James Cook University was one of the two co-chief scientists for this expedition. Other Australian researchers were, and some still are, participating intensively in the project.

In co-operation with ANZIC (Neville Exon and Sarah Howgego) and other Australian partners, the ECORD Outreach team, led by Albert Gerdes, organised a number of events. In the months ahead of the expedition, an extensive list of Australian media outlets was compiled. Journalists and local VIPs were then invited to a media conference and media releases were distributed. On 11 February, a very well attended news conference was held in the Jupiters Hotel. Among others, the co-chief scientists and the expedition project manager informed the journalists about the science and logistics of the expedition. The conference was completed with a tour of the vessel, during which the journalists had the opportunity to interview a number of expedition participants. The feedback from the journalists was that they were very satisfied with the event.

In the days before the media conference, both the co-chief scientists and representatives of ANZIC and ECORD had already given interviews for radio and print media. Along with the media conference, a press release was distributed through the worldwide IODP channels. The Australian media response included reports about the expedition that were published by ABC TV and Radio, the *Cairns Post* and other privately owned television and radio stations. The media release was also picked up by international online and print media in Japan, India, Europe

and the Fiji Islands. The ECORD Outreach team produced two posters and an audiovisual show that were exhibited at the Reef HQ Aquarium in Townsville.

A second media conference was organised during the onshore science party meeting that was held in July 2010 in the IODP Bremen Core Repository. The event was attended by regional TV teams, radio journalists, photographers and journalists from regional print media and the national German news agencies respectively. Again, a media release was distributed on the same day providing information about the findings of the science party. Articles appeared in 20 German newspapers.

The co-chief scientists starred in an ABC nationwide science program and gave an interview for the Queensland branch of ABC; a few international media outlets also picked up the news. Last, but not least, both the start of the expedition and the results achieved during the science party were communicated within the IODP community.

Overall, the media campaign for Expedition 325 was one of the most successful for all the mission-specific platform operations carried out by ECORD.



Figure 8.1. The media filming *Greatship Maya* in Townsville before Expedition 325

Source: A. Gerdes of ECORD

Hobart *JOIDES Resolution* port call after Wilkes Land Expedition 318, March 2010

A major outreach and publicity effort was made after the Wilkes Land Expedition 318, which was investigating the changes in climate and oceanography in the last 55 million years, as Australia and Antarctica separated, Antarctica froze over and global climate cooled. The *JOIDES Resolution* port call featured three days of ship tours and a well-attended public lecture at the University of Tasmania by expedition co-chief scientist Henk Brinkhuis. Both the University of Tasmania and IODP media groups were involved and this resulted in excellent TV, radio and press coverage in Tasmania and beyond. The organising group included Neville Exon and Sarah Howgego from the ANZIC IODP Office, Brad Clement and two others from the IODP managing group in Texas, and David Divins and Kristin Ludwig from the Ocean Leadership publicity group. Dr Kevin Welsh, an expeditioner from the University of Queensland, was among the tour guides.

On Wednesday 10 March, about 60 people toured. This included 30 scientists from the University of Tasmania, including Professor David Green, CSIRO, including Dr Ian Cresswell, and ANU, including Professor Andrew Roberts. We also showed 30 students from the University of Tasmania over the ship. We were particularly honoured to host the Governor of Tasmania, His Excellency Peter Underwood, who gave us a much-appreciated reception at Government House later that day.

Thursday was given over to tours for 65 senior school students interested in science, and their teachers. They came from Ogilvie High School, New Town High School, Rose Bay High School and Kingston High School. They were very interested and asked intelligent questions about the ship and the science.

Friday was devoted to a VIP and media tour, with Senator Kim Carr leading the group. He spoke of the importance of marine science to Australia, linked the newly planned Australian research vessel *Investigator* to IODP research, and was given some Miocene sediment as a memento. Among the other dozen eminent guests were Professor Daryl Le Grew, Vice-Chancellor of the University of Tasmania; Dr Bruce Mapstone, Chief of the CSIRO Division of Marine and Atmospheric Research; Dr Geoff Garrett, former Chief of CSIRO and soon-to-be Chairman of the ANZIC Governing Council; Professor Michael Stoddart, Director

of the Institute of Marine and Antarctic Studies; Dr Tim Moltmann, Director of the Integrated Marine Observing System; and Professor Ross Large, Director of the Centre of Excellence in Ore Deposits.

All in all, this was a hugely successful exercise in bringing IODP science to the attention of the Minister for Science and Research, the Tasmanian scientific community and the media.



Figure 8.2. Australian dignitaries aboard *JOIDES Resolution* in Hobart
Source: Neville Exon

Auckland *JOIDES Resolution* port call between South Pacific Gyre Microbiology (329) and Louisville Seamount Chain (330) Expeditions, December 2010

This port call in Auckland, on 14 and 15 December, was organised by GNS Science (Giuseppe Cortese), the Auckland Museum Institute (Andrea Webley) and the University of Auckland (Lorna Strachan), with support from IODP and Ocean Leadership (Sarah Saunders). The activities included eight ship tours (112 people had a detailed visit of the ship), a guided tour of the Auckland Museum with a VIP lunch and reception (65 people registered) for the expedition scientists,

and several talks about the bracketing expeditions (South Pacific Gyre Microbiology and Louisville Seamount Chain). The VIP reception featured talks by Mitch Malone (IODP) and by co-chief scientists Steven D'Hondt (University of Rhode Island, South Pacific Gyre Microbiology Expedition) and Anthony Koppers (Oregon State University, Louisville Seamount Trail Expedition).

An evening lecture for the public was also held, with 70 people registering. It included talks by Bruce Hayward (Geomarine Research), Christian Ohneiser (University of Otago), David Smith (University of Rhode Island) and Anthony Koppers (Oregon State University).

A meeting was also arranged at the Auckland Museum with representatives from the Ministry of Science and Innovation and various leading scientific figures from several New Zealand research institutes and universities, in order to stress the importance of scientific drilling for New Zealand. The aim was to strengthen the case for a stable funding base for New Zealand's IODP membership.

These activities generated a lot of media interest including from Radio NZ, TV3 New Zealand, the *New Zealand Herald*, the NZ Press agency, and Australia ABC Science. Steven D'Hondt (University of Rhode Island, USA, co-chief scientist South Pacific Gyre Expedition) and John Moreau (University of Melbourne, shore-based scientist) were interviewed by the Australian Science Media Centre about their interest in discovering, quantifying and understanding microbial life forms adapted to live in a large area of the Pacific Ocean known to be very poor in nutrients. A news item reporting on the *JOIDES Resolution* Auckland port calls was published in the journal *Scientific Drilling* (No. 11, March 2011, p. 76).

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