



Australia and New Zealand form the Australia-New Zealand IODP Consortium (ANZIC), and the two countries have access to all IODP activities. This bulletin provides current news, job opportunities, scholarships and events relating to both national and international scientific communities.

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News from the ANZIC Office

We have been busy since the last Bulletin came out.

The first big activity was the Governing Council Meeting at James Cook University in Townsville on 4 March, hosted by James Daniell. The major discussion point was the Review of Australia's role in IODP, carried out by the Allen Consulting Group led by Grahame Cook. This review has been very thorough and very valuable. Its conclusions were favourable about the present and future IODP, but suggestions were made about areas where we could strengthen things. Grahame summarised the review, suggested that we should regularly assemble data of value to any review, and then outlined his ideas for more outreach. Council expressed its appreciation of the review's quality and value as we go into the next phase of IODP.

Council also approved the travel for 10 Australian scientists, selected on the basis of EOIs, to attend the *Chikyu+10* Workshop in Tokyo from 21 to 23 April. This workshop will be chaired by Mike Coffin from the University of Tasmania, and there will be a very strong Australian and New Zealand scientific contingent of fifteen, excluding Mike.

On March 5 a number of us spent the morning at the Australian Institute of Marine Science, hosted by John Gunn and Janice Lough. We were all very impressed by their activities in areas such as varying the pH and temperature in tanks of living corals, to try to better understand the likely effects of global warming. We also had a quick look at their wonderful collection of coral cores that illuminate the effects of past climate and human-caused changes in our reefs.

Richard Arculus and others have been working hard on a bid for ARC/LIEF funding for the next phase of IODP, and we will be going out to the key players in various institutions to build support for that bid in the next few days. We need all your support in this undertaking. Key documents are available on <http://iodp.org.au/about/international-ocean-discovery-program-2013-2023/>.

Neville Exon and Catherine Beasley

The Allen Consulting Group's Review of Australian Participation in IODP has been released this week. Please read the full report on our website [here](#) and circulate this link among stakeholders in your institution.

- IODP (2003-2013) is the world's largest international collaborative Earth sciences research program with 26 members, including Australia's largest trading partners.
- The oceans cover around 71% of the Earth's surface and scientific ocean drilling is crucial to the understanding of the fundamental processes and geological history of the planet.
- Australia has one of largest marine jurisdiction on Earth totaling about 10 million square kilometers (excluding the territory of Antarctica), much more than its land mass of about 7.6 million square kilometers.
- The resources in Australia's marine jurisdiction contributed about \$44 billion to Australia's economy in 2011 and this is expected to increase to \$100 billion by 2025.
- Through its membership of IODP Australia has access to major scientific drilling and equipment with an estimated value of \$US 1 billion, and annual operating costs of about \$US 170 million.
- IODP continues more than 40 years of ocean drilling in which Australian scientists have been involved.
- Australia's annual IODP membership fees are \$US 1.4 million, with the total direct and indirect costs of participation in IODP over the 2008-2013 period estimated at \$AUD 14.8 million.
- The ANZIC IODP consortium is itself a major scientific collaboration involving some 16 universities and several publicly funded research agencies across Australia and New Zealand.
- ANZIC has secured berths on nearly all IODP scientific expeditions since 2008 and a number of influential voting and non-voting positions on key IODP scientific committees, including for the 2013-23 Science Plan.

- Australian scientists have been authors of 8.9% of the 7,135 peer reviewed publications resulting from ocean drilling from 2003 to 2012, with further publications in preparation.
- Analysis of citations by country shows that the average citation rate of Australian authored ocean drilling related papers of 20 is significantly above the world average of 17.
- Analysis of citations by scientific journal shows that average citation rates for Australian authored ocean drilling related papers for five leading journals is above both that for other IODP-related papers and for the journal as a whole.
- A global map of collaborations based on jointly authored ocean drilling papers between 1996 and 2011 shows that Australian scientists are very well connected with leading international researchers and institutions.
- Leading university scientists making substantial use of ocean drilling material have been awarded \$7 million in various ARC grants over the course of the IODP
- The results of ocean drilling in Australian waters have helped inform the geological assessments undertaken to support the Government's Offshore Petroleum Exploration Acreage Release Program.
- Some petroleum companies working in Australia's territorial waters have also used data from scientific ocean drilling to help inform and de-risk their exploration activities.
- Australian involvement in ocean drilling activities has helped train a number of PhD students, given post-doctoral researchers valuable experience and informed the teaching and research of academic staff

We are now accepting applications for scientific participation in the first phase of **Nankai Trough IODP Expedition 348: *NanTroSEIZE*** ***Plate Boundary Deep Riser Drilling 3* aboard the Chikyu.**

This expedition is part of the long-term effort to drill a deep riser hole into the plate boundary fault system. The overall objective of this multi-phase project is to sample the deep interior of the accretionary complex in the mid-slope region beneath the Kumano forearc basin off the coast of Japan using both cores and drill cuttings. This expedition will drill through the **lower accretionary prism** interval collecting data using logging while drilling, and install a long-term monitoring system.

The main expedition goal is to deepen IODP Riser Hole C0002F to at least ~3600 meters below the sea floor (mbsf). An additional objective is to install a long-term monitoring package (similar to a CORK observatory) in non-riser Hole C0010A. This is phase 1 of a two-phase Expedition plan to extend riser Hole C0002F to ~5200 meters below the sea floor (mbsf). The objective of this two-phase plan is to drill across the prominent reflection interpreted as the key plate boundary fault known as the megasplay to collect cores, logging data and install casing. Hole C0002F has already been drilled to 2005.5 mbsf (and cased to 856 mbsf) on Expeditions 326 and 338.

Expedition 348 is now slated to take place from **August 2013 through January, 2014**. deepen the existing hole, installing casing to ~ 3600 mbsf in two (or 3) casing strings. LWD (logging while drilling) operations, cuttings collection and analysis, and limited coring below 2000 mbsf will be attempted. Also planned during Exp. 348 is the installation of riserless permanent LTBMS/CORK-type observatories at Site C0010. Hole C0002G also will be revisited to replace the temporary GeniusPlug observatory with a permanent observatory for continuous monitoring operations.

See also the links for the **fact sheet**: <http://campanian.iodp.org/exp348/>.

Our Japanese contact states that "while there will be time spent on the engineering-related observatory deployment, there will be cuttings and logs, as well as limited core, from deep within the accretionary prism. Although not as exciting for some as the planned follow-up expedition due to begin in early 2015, sailing on 348 will guarantee access to data and samples from the 2015 expedition (~3600-5200 m). There is going to be a lot of competition for spots on that last phase, so an early "buy-in" would be a good selling point. Scientists sailing on 348 may also re-apply for the follow-up."

Because of the long duration of this expedition (August 2013 – January 2014), the selected **science party** will consist of several teams organized to participate for up to eight weeks each in a staggered schedule. Scientists specialized in the following are encouraged to apply: sedimentology, structural geology, organic and inorganic geochemistry (including mud gas monitoring), microbiology, physical properties, micropaleontology, paleomagnetism, well logging analysis, and core-log-seismic integration.

For ANZIC scientists all travel costs are covered. In addition the Australian IODP Office can provide **up to \$A40,000 for post-cruise activities** (mainly analytical costs) for Australian university and research institution scientists and post-graduate students, if funding cannot be obtained in any other way. Applications for such funding can only be made after expeditions are completed and samples are in hand. For more information on our funding rules see www.iodp.org.au. New Zealand has a similar but more limited scheme.

The **deadline** for scientists to submit applications to ANZIC is **1 April 2013**. This is an excellent opportunity for scientists, doctoral students or post docs to collaborate with an international team of scientists. Australians should visit www.iodp.edu.au for a link to the application form, which should be sent to Stephen Gallagher (sjgall@unimelb.edu.au) with a copy to Neville Exon (Neville.Exon@anu.edu.au). Interested New Zealanders should contact Chris Hollis (NZODP@gns.cri.nz).

Neville Exon , ANZIC Program Scientist (02 6125 5131)

Dorothy Hill Postdoctoral Research Fellowship in Palaeontology and Stratigraphy



An individual is sought for the Dorothy Hill Postdoctoral Research Fellowship to engage in original research in the field of carbonate geology and/or palaeontology with an emphasis on rock-forming organisms. The position will benefit from a larger initiative to strengthen research and training in palaeontology at the University of Queensland and is open in particular to individuals with research skills related to modern or fossil reefs and/or microbialites. Preference will be given to applicants who can provide expertise relevant to existing research projects in the School of Earth Sciences. Current projects in the School include Holocene coral reef growth, carbonate diagenesis on seamounts in the Coral Sea, geochemistry of microbialites, and Carboniferous corals and reefs of Queensland. The successful candidate will be part of a diverse team of research professionals and students aimed at fundamental and applied research in these areas. This is a 1-year fixed-term position at Level A.

Additional information and application details can be found at <http://uqjobs.uq.edu.au/jobDetails.asp?JobIDs=494404&CategoryID=671&stp=AW&sLanguage=en>.

We are pleased to announce the conference **Ocean Gateways Past and Present: Significance for Ocean Circulation and Terrestrial Climate**, which will be held on the 5-7 of May 2013 in Jerusalem. The conference is sponsored by the European Commission 7th Framework Programme.

Registration is now open for the conference and we invite the submission of abstracts from the fields of ocean observations, climate modelling and marine and terrestrial palaeoclimate reconstructions. Emphasis of the conference is on the circulation regimes of ocean gateways, the role of wind systems in defining these regimes, variability of the gateway circulation and its significance for ocean circulation and climate presently and in the past.

Registration fee is 180 USD for academic faculty and professionals, 90 USD for students and Postdocs. The registration fee covers the full participation in the meeting, coffee breaks and the conference booklet of abstracts. Bursary grants are available to assist in particular young scientists to attend the conference. Applications for bursary grants must be submitted by or before the 15th of March 2013.



Please visit the conference web page <http://www.gatewaypresentpast.net/>



The conference web site with all your information needs is: <http://www.amsaconference.com.au/>.

All submitted abstracts will be evaluated by the scientific committee and you will be advised of your abstract's acceptance status (refer to Important Dates (<http://www.cvent.com/d/0cggc7/30K>)).

SS02 Shaped by the past - new futures in South Ocean Palaeoceanography

Rationale:

Southern Ocean Palaeoceanography remains an internationally focused exploration frontier. Many nations are now focusing on Australian sector records from the opening of the Tasman seaway and studies deciphering the oceanic responses to the rise and fall of Antarctic glacial conditions, to the unresolved Subantarctic productivity response during the Quaternary or species evolution and responses to climate change. Many plans for future coring in these regions are being planned and approved. Exciting advances in geochemical proxy applications and early life archean-bacterial records from sediments are also growth areas for palaeoceanographic interpretations. This symposium provides a timely opportunity to gather regional and international experts and provide students with an outlet to develop new research directions in a revitalised science arena, particularly with the scientific commissioning of the Australian Marine National Facility *RV Investigator* from 2013.

*Dr Leanne Armand (Macquarie University- Australia),
Dr Helen Neil (NIWA-New Zealand) and
Dr Peppe Cortese (GNS-Science, New Zealand).*

SS18 Plankton: shaping the past, present and future

Rationale:

Plankton inhabit the largest biome on the planet - the pelagic realm- from equatorial to polar, from epipelagic to hadal, spanning all biogeographic provinces of the ocean. They play a critical role in global biogeochemical cycles, support pelagic foodwebs, and are used as indicators of global change. Every second breath we take comes from phytoplankton and our oil deposits were formed by zooplankton. In this session, we will consider contributions on all aspects of plankton research, from studies in the tropics to the poles; those conducted in the laboratory, field or based on modelling; and in subject areas including paleo, climate, physiology, ecology, and oceanography. Particularly welcome are contributions describing the impacts of global change – climate, eutrophication, pollution, climate and fishing – on plankton, and how this might shape our future. Our main aim is to bring the plankton research community together to exchange the latest science and ideas.

*Convenors: Richardson, A.J., CSIRO/University of Queensland,
Swadling, K., University of Tasmania,
McKinnon, A.D., AIMS,
Doblin, M.A., University of Technology Sydney,*