



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.

For more information contact:
Website: www.iodp.org.au
Website: drill.gns.cri.nz

Apply to join EXP. 364 -Chicxulub Impact Crater

ANZIC Application deadline 1 May 2015

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News from the ANZIC Office

Our submission to the Australian Research Council for ARC/LIEF funding of \$A2.2 million p.a., to allow continuation of our activities at the present level for five years, has been submitted. Richard Arculus of ANU is the lead CI and we have 15 Australian partners contributing \$875,000 p.a. to the bid. Our New Zealand partners will be led by GNS Science and will contribute funding of \$US300,000 p.a.. We have a strong case and are very hopeful of suitable funding.

About 40 scientists attended the two-day *Chikyu* IODP planning workshop to push on with building a full proposal for deep Cretaceous drilling on the Lord Howe Rise. Pre-proposal 871-CPP (Gondwana Margin deep drilling) was well received by the IODP Science Evaluation Panel late last year, and the two major proponents, Geoscience Australia and JAMSTEC (which runs the *Chikyu*) had set up the workshop at Sydney University. This proposal for four months of very expensive riser drilling could be jointly funded under a JAMSTEC/GA MOU, if scientific and financial support for it is sufficient. JAMSTEC's Wataru Azuma, who led a team of a dozen Japanese scientists, was one organiser, and Clinton Foster and Andrew Heap of Geoscience Australia were their organisers. The Chairman of the meeting was Mike Coffin of the University of Tasmania, and scientists attending included Dietmar Mueller from the University of Sydney, Julien Collot from New Caledonia, Nick Mortimer from GNS Science, and Neville Exon from the ANZIC office, and had a very broad span of expertise including tectonics specialists, igneous petrologists, paleoceanographers and geomicrobiologists. The ANZIC office funded half a dozen participants from our member organisations.

The discussion largely surrounded the global scientific arguments for drilling the first stratigraphic core hole into the Cretaceous strata of Lord Howe Rise, as well as basement rocks. There was also discussion of what was feasible to address the desires of all the scientists present. The deep hole would be drilled up to 3500 m below the seabed with all but 600 m of it in the Cretaceous and continuously cored. It was a very fruitful workshop and a writing group intends to have a full proposal submitted to the Science Evaluation Panel by the 1 October deadline, giving us a good chance of drilling by late 2017 if all the key elements, including the funding, fall into place. The draft proposal will be extensively reviewed by the science community. There was also discussion of the detailed site surveys, to be carried out by the JAMSTEC research vessel *Kairei* in 2016 and 2017. A brief report on the workshop and the writing timetable will be prepared before the end of the month and put up on the ANZIC, Japanese IODP, and general IODP websites.

Plans are moving forward for the IODP Forum Workshop to be held in Canberra from 8-10 July. About 45 scientists from around the world will attend this meeting looking at the implementation of the science set out in the IODP Science Plan. It will be chaired by Keir Becker of the University of Florida, and his successor has just been selected by a special Forum Committee. That new Chairman will be the dynamic Jamie Austin from the University of Austin in Texas, and it is expected that he will attend. Geoff Garrett, the ANZIC Chairman, will also attend and we will host a VIP dinner involving key visitors and high-level Australians.

Plans are also developing for the port call of *JOIDES Resolution* in Fremantle before it sails on the Northwest Shelf IODP Expedition 356, with tours of the ship to be held on 31 July and 1 August. The expedition will investigate the last 5 million years of paleoceanography, paleoclimate and vertical tectonics in the region. Stephen Gallagher of the University of Melbourne will be a co-chief scientist, and we have invited senior Federal Ministers to visit the vessel on 31 July.

As regards other expeditioners on *JOIDES Resolution*, Alan Baxter (University of New England), who sailed as a nanofossil expert, has returned from the Bengal Fan Expedition 354. Sophia Bratkenov (Macquarie University) sailed as an organic geochemist at the beginning of April on the Arabian Sea Monsoon Expedition 355. Craig Sloss (QUT) will join the Maldives Monsoon Expedition 359 at the end of September as a sedimentologist, and Mark Kendrick (ANU) will join the Indian Ocean Moho Expedition 360 at the end of November.

Morgan Williams of ANU will take part in the European-funded alternative platform Expedition 357, investigating Atlantis Massif Serpentinization and Life, as an inorganic geochemist. The expedition will be on the northern mid-Atlantic Ridge in the period October-December this year, but the cores will be split, described and sampled by the Science Party in Bremen early in 2016. Morgan will not be on the vessel but is part of the Science Party.

We called for ANZIC applications on February 3 for the Sumatra Seismogenic Zone Expedition 362, starting at the end of July 2016, for which our deadline is Wednesday April 15.

Neville Exon and Catherine Beasley

Towards improved geological maps of Antarctic rocks and surficial deposits

Underpinning datasets for studies of glacial dynamics and climate change

A new SCAR Action Group, the Geological Mapping Update of Antarctica (GeoMap) has formed to update geologic geospatial information of Antarctica by gathering both rock and surficial deposit information and compiling it into a modern digital framework. They will be running a Pre-Symposium Workshop at ISAES XII on 12 July 2015 which aims to:



- focus on the scope and purpose of such a dataset;
- exemplify some significant advances already achieved;
- introduce high resolution satellite and other new technologies available, as well as methods of GIS capture and delivery;
- discuss an overarching high level digital stratigraphic plan/nomenclature and data design;
- determine areas of international interest in providing existing map data and/or compiling different regions;
- establish a working team, timetable and action plan.

Wide international representation is expected and all interested parties are welcome to attend.

For more information, see the [news item on the GeoMap website](#) or contact Simon Cox <S.Cox@gns.cri.nz>.

Apply to join EXP. 364 -Chicxulub Impact Crater

ANZIC Application deadline 1 May 2015

We are now accepting ANZIC applications for scientific participation for IODP Expedition 364 in 2016.

THE EXPEDITION: The full proposal, as well as up-to-date expedition information, can be found on the Expedition 364 webpage <http://www.eso.ecord.org/expeditions/364/364.php>. A good overview is provided by the Addendum, which covers the latest plans. It is anticipated that the offshore phase of the expedition will last up to 70 days in the period April to June 2016 (exact duration and dates to be confirmed), with only a subset of the Science Party participating. Offshore activities will focus on core recovery, curation, sampling for ephemeral properties including microbiological sampling, and downhole logging. The cores will not be split at sea. Subsequently, an Onshore Science Party (OSP) will be held at the MARUM, University of Bremen, in Summer/Fall 2016 (exact dates to be confirmed), where the cores will be split. The OSP is expected to be up to 4 weeks long, the exact length dependent on core recovery. All members of the Science Party must attend for the whole duration of the Onshore Science Party. Please see <http://www.eso.ecord.org/expeditions/osp.php>. Successful applicants will be invited either as an offshore-onshore participant, or as an onshore-only participant. It is unlikely that any ANZIC participant will be invited to join the offshore party.

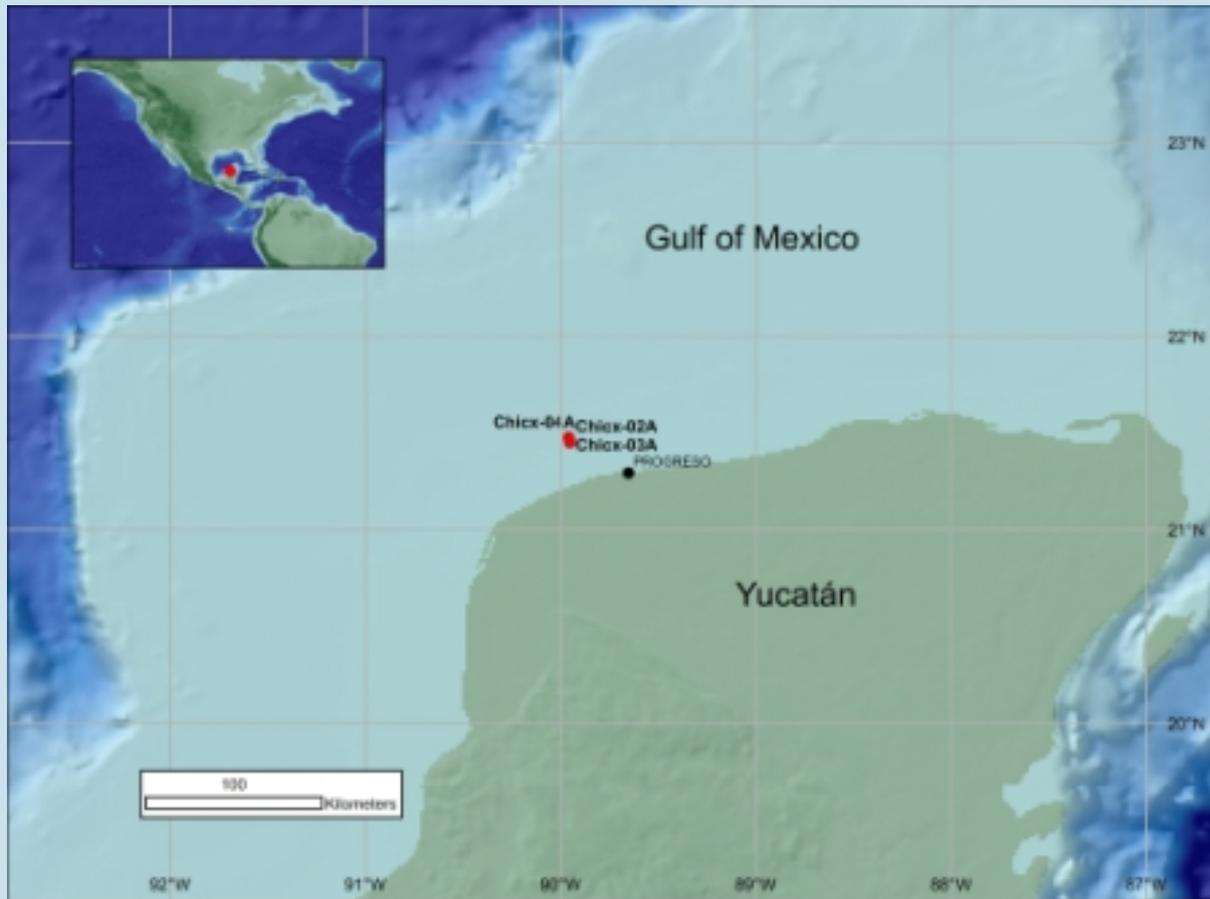
This is an exciting opportunity for a wide range of scientists interested in the Chicxulub impact crater and its broader implications. Specialists in a wide range of fields will be considered for the expedition including paleontology, sedimentology, microbiology, organic geochemistry, inorganic geochemistry, structural geology, impact petrology, metamorphic petrology, paleomagnetism, physical properties, geophysics and petrophysics/downhole logging.

The drilling will deal with several questions related to large impact crater formation on Earth and other planets, and the effects of large impacts on the Earth's environment and ecology. The expedition target is the unique Chicxulub impact crater, Mexico, which is the only known terrestrial impact structure that has been directly linked to a mass extinction event (the K-Pg mass extinction). Of the three largest impact structures on Earth it is the best-preserved, and is the only terrestrial crater with a global ejecta layer. Additionally, it is the only known terrestrial impact structure with an unequivocal topographic peak ring.

This expedition aims to drill and core into the Chicxulub impact structure to recover cores from, and above, the peak ring. In doing so, the expedition aims to address several questions, including: 1) what rocks comprise a topographic peak ring (basement, breccia or something else?) and how are peak rings formed; 2) how are rocks weakened during large impacts to allow them to collapse and form relatively wide, flat craters; 3) what caused the environmental changes that led to a mass extinction and what insights arise from biologic recovery in the Paleogene; and 4) what effect does a large impact have on the deep subsurface biosphere and can impacts generate habitats for chemosynthetic life?

The expedition will drill and core a single 1500 m deep borehole at a site about 30km northwest of Progreso, Mexico, on the Yucatan shelf, Gulf of Mexico (see webpage <http://www.eso.ecord.org/expeditions/364/364.php>). For further details from ESO, please contact: David McInroy, ESO Science Manager, dbm@bgs.ac.uk

INFORMATION WEBINAR: To learn more about the scientific objectives of this expedition, life at sea, and how to apply to sail, please join us for a web-based seminar on Tuesday 21st April 2015 at 2pm BST (1pm GMT). To participate in the webinar, you will need access to the internet with a computer equipped with a microphone and speaker. To register, please visit <https://www.surveymonkey.com/s/IODP364>.



GENERAL: This is a great opportunity for scientists, including post-graduate students, to get involved in cutting edge science with a team from around the world addressing one of geoscience's most exciting phenomena. Can senior scientists please consider whether they know of outstanding post-graduate students who could put about six months work (*in toto*) into such an undertaking? For all applicants, and especially students, we will need to be assured that applicants intend to stay in Australia or New Zealand to work on this activity, and have access to departmental facilities, for a reasonable time post-cruise - ideally a couple of years.

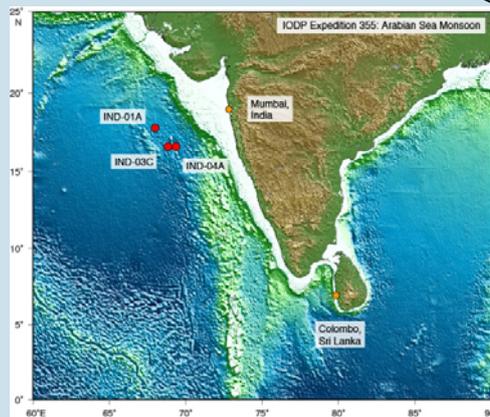
For ANZIC scientists all travel costs will be covered. In addition the ANZIC IODP Office may provide up to \$A40,000 for post-cruise activities (mainly analytical costs) for Australian and New Zealand university and research institution scientists and post-graduate students, if funding cannot be obtained in any other way. Applications for such funding can only be made after expeditions are completed and samples are in hand.

The deadline for scientists to submit applications to ANZIC is Friday, May 1. 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, a completed version of which should be sent to Neville Exon (Neville.Exon@anu.edu.au) and Rob McKay (robert.mckay@vuw.ac.nz). New Zealanders should contact Giuseppe Cortese (NZODP@gns.cri.nz).

AT SEA

Expedition 355 Arabian Sea Monsoon is underway with Macquarie University's Sophia Bratenkov sailing with the organic geochemistry team.



Would your school or interest group like to tour the JR and meet the scientists aboard Leg 355? Book a Live Video Broadcast with the JR team here:

https://docs.google.com/forms/d/1cjdnlKAFy0RT-vMp0h_nbZ6zHQ4siVJU5QXCNGADpfw/viewform

Follow the *JOIDES Resolution* on [Facebook](#) and read daily or weekly reports at:

<http://iodp.tamu.edu/scienceops/sitesumm.html>

International Coastal Symposium 2016

It is with great pleasure that we invite you to the International Coastal Symposium (ICS2016), to be held from Sunday 6th – Friday 11th March 2016 at the Crowne Plaza, Coogee Beach, Sydney, Australia. The theme is 'Coasts in Space and Time'.

The International Coastal Symposium (ICS) is now in its 14th edition and this is only the second time it has been held in Australia since the Gold Coast in 2007.

The symposium will be hosted by the Geocoastal Research Group, School of Geosciences at the University of Sydney, under the auspices of the Coastal Education and Research Foundation (CERF) and the *Journal of Coastal Research* (JCR).

The ICS brings together delegates from all over the world to collaborate and discuss the most current coastal research studies and projects. The proceedings of the conference, published as peer-reviewed papers in the *Journal of Coastal Research*, represent an invaluable resource for coastal scientists, engineers and managers.

- The meeting will consist of a number of sessions on coastal science comprising geomorphology, geology, ecology, biology, coastal engineering and coastal management including planning and policy.
- Keynote speakers will include international leaders in coastal science and engineering with special attention to highlighting Australian expertise.
- Social functions including a Welcome Reception and Conference Dinner will be held to promote networking opportunities.
- Field trips will be organised to showcase local knowledge and study cases. Post conference excursions are also envisaged including trips to the Great Barrier Reef and to the coast of NSW.

Abstract submissions are open from 1st February 2015 to 30th April 2015. Visit the Abstract page of the website for full details – <http://ics2016.org/abstracts/>

Be sure to visit <http://www.ics2016.org/> as information will be updated here regularly. If you have any questions please contact the ICS2016 Secretariat via email ics2016.secretariat@sydney.edu.au or phone +61 (0)411 075 030.