

FALL  
2011

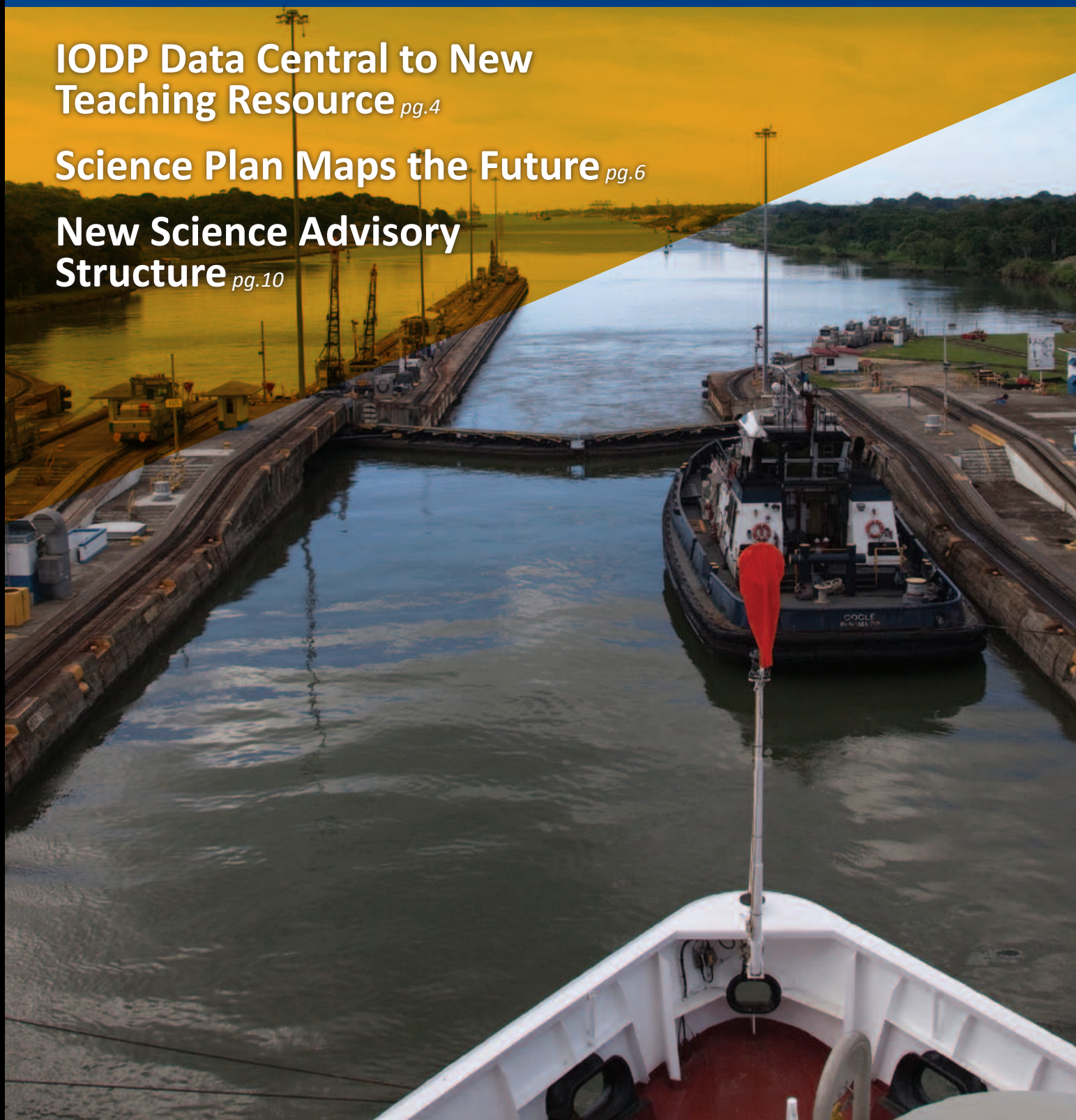
# CORE DISCOVERIES

The Newsletter for  
US Scientific Ocean Drilling

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Teaching Resource *pg.4*

Science Plan Maps the Future *pg.6*

New Science Advisory  
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*On the cover: JOIDES Resolution passes through the Panama Canal (Photo courtesy of IODP-USIO).*

The Integrated Ocean Drilling Program (IODP) is an international research program dedicated to advancing scientific understanding of the Earth through drilling, coring, and monitoring the seafloor. The U.S. Science Support Program (USSSP) supports the involvement of the U.S. scientific community in IODP and is funded by the National Science Foundation (NSF). The *JOIDES Resolution* is a scientific research vessel managed by the U.S. Implementing Organization of IODP (USIO). Together, Texas A&M University, Lamont-Doherty Earth Observatory of Columbia University, and the Consortium for Ocean Leadership comprise the USIO. IODP is supported by two lead agencies: the U.S. NSF and Japan's Ministry of Education, Culture, Sports, Science, and Technology (MEXT). Additional program support comes from the European Consortium for Ocean Research Drilling (ECORD), the Australia-New Zealand IODP Consortium (ANZIC), India's Ministry of Earth Sciences, the People's Republic of China (Ministry of Science and Technology), and the Korea Institute of Geoscience and Mineral Resources.

To contact the editor or subscribe to *Core Discoveries*, contact:  
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For more information about IODP, visit: [www.iodp.org](http://www.iodp.org)

For more information about USIO and USSSP, visit:  
[www.oceanleadership.org/programs-and-partnerships/](http://www.oceanleadership.org/programs-and-partnerships/)



## UPCOMING EVENTS/ MEETINGS/WORKSHOPS

### GSA Short Course: Teaching About Earth's Climate History

October 8, 2011; 8:00 am – 5:00 pm  
Minneapolis, Minnesota

[www.geosociety.org/meetings/2011/courses.htm](http://www.geosociety.org/meetings/2011/courses.htm)

### Geological Society of America Annual Meeting

October 9-12, 2011  
Minneapolis, Minnesota

[www.geosociety.org/meetings/2011/](http://www.geosociety.org/meetings/2011/)

### International Conference on Asian Marine Geology (ICAMG)

October 10-14, 2011  
Goa, India

<http://icamg7.nio.org/>

### Scientific Drilling in the Indian Ocean Workshop

October 17-19, 2011  
Goa, India

[http://iodp.org/index.php?option=com\\_content&task=view&id=583&Itemid=1243](http://iodp.org/index.php?option=com_content&task=view&id=583&Itemid=1243)

### IODP Primer: An Introduction to the Ocean Drilling Programs

December 4, 2011; 1:00 – 5:00 pm  
San Francisco, California

*Please check USSSP website for more information  
(see <http://iodp-ussp.org/funding/workshops/upcoming-workshops/>)*

### AGU Short Course: Teaching About Earth's Climate History

December 4, 2011; 8:00 am – 5:00 pm  
San Francisco, California

<http://sites.agu.org/fallmeeting/town-halls-and-workshops/workshops/>

### Upcoming SAS Meetings

#### Proposal Evaluation Panel

December 1-3, 2011  
San Francisco, California

#### Science Implementation & Policy Committee

January 19-20, 2012  
Goa, India



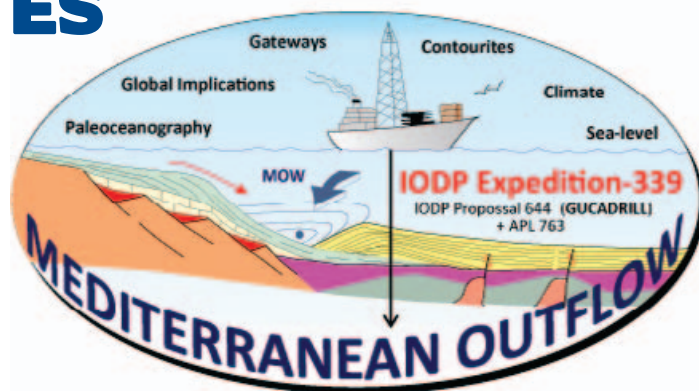
# EXPEDITION UPDATES

## Tracing the Mediterranean's Outflow

Could warm water flowing from the Mediterranean have been responsible for defining the climate of the North Atlantic? This is the question being asked by Dorrik Stow (Heriot-Watt University, UK) and Francisco Javier Hernández-Molina (Universidad de Vigo, Spain), co-chiefs of IODP Expedition 339 Mediterranean Outflow.

This expedition will take place from November 17, 2011 to January 17, 2012 offshore Portugal in the Gulf of Cádiz, and offers scientists the opportunity to closely examine the sedimentary architecture of a regional continental margin, with an eye towards understanding how the outflow of warm, Mediterranean water may have influenced climate shifts and ocean currents in the North Atlantic.

The *JOIDES Resolution* will sail to the Gulf of Cádiz to target a continental margin sequence with particularly high rates of sediment accumulation by contourite deposition. This



depositional system is the cardinal reason for selecting this study area, as it will allow researchers a uniquely coherent view of the sedimentation of the region. These deposits will, in turn, provide a snapshot of the region's paleoclimatic and paleoceanographic development over the past 5 million years, along the midslope of the Iberian margin.

To learn more about the Mediterranean Outflow expedition, visit: [http://iodp.tamu.edu/scienceops/expeditions/mediterranean\\_outflow.html](http://iodp.tamu.edu/scienceops/expeditions/mediterranean_outflow.html).

## Juan de Fuca CORKs Revisited

During summer 2010, scientists onboard the *JOIDES Resolution* on IODP Expedition 327 Juan de Fuca Ridge Flank Hydrogeology installed two undersea borehole observatories ("CORKs") in the ocean floor 200 kilometers west of Vancouver Island, Canada. These CORKs form a part of a sampling and monitoring network designed to help scientists determine the properties of the ocean crust, and

to better understand how water, heat, and chemicals are transported across vast distances below the bottom of the ocean. The full report for this expedition is now available at: <http://publications.iodp.org/proceedings/327/327toc.htm>.

Expedition AT18-07 returned to the Juan de Fuca CORKs this summer to verify that the observatories previously installed are working as intended. Led by 327 co-chief Andrew Fisher and a group of other principal investigators, this expedition was carried out aboard the *Atlantis* research vessel and involved the use of the remotely-operated vehicle, *Jason*. Among a number of accomplishments during the expedition, the vintage 1996 CORK in Hole 1027C was successfully retrofitted to provide high-quality pressure data collected with a modern gauge and logger set.

Also during Expedition AT18-07, Deep Earth Academy partnered with the Center for Dark Energy Biosphere Investigations (C-DEBI) to run an extensive education and outreach program. Three secondary school teachers, a museum educator, and a videographer sailed on the expedition and conducted live video broadcasts to summer schools, museums, and camps; posted regularly to blogs, Facebook, and Twitter; supported the Adopt-a-Microbe project; created numerous short videos; and developed curriculum for classroom use.



Photo courtesy of IODP-USIO

## EDUCATION & DIVERSITY NEWS

### Bringing the Science of Ocean Drilling Research into the College Classroom

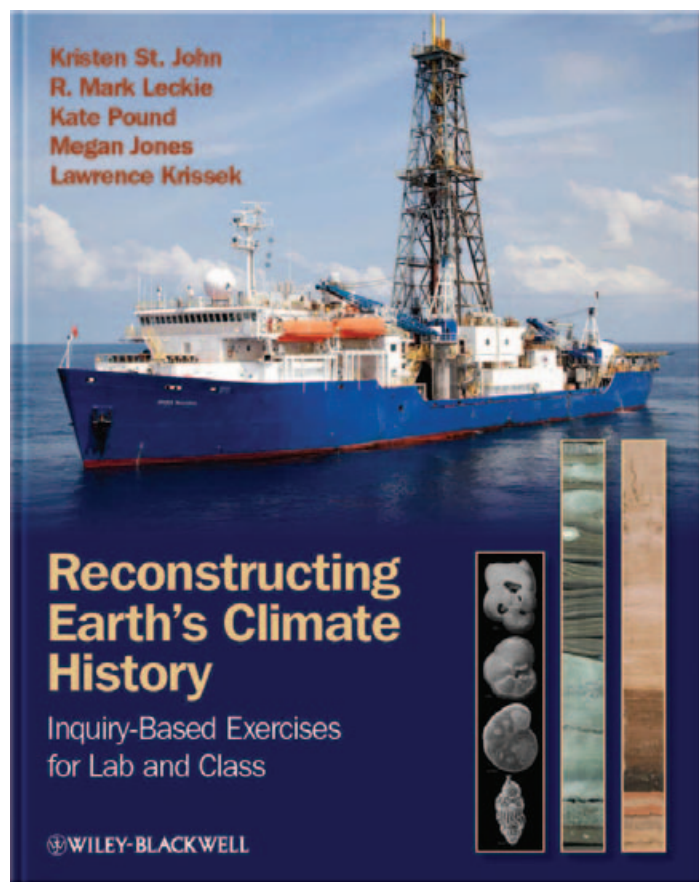
by Kristen St. John, Megan Jones, Larry Krissek, R. Mark Leckie, and Kate Pound

The techniques, practices, and discoveries of IODP and its predecessor programs – the Ocean Drilling Program (ODP) and the Deep Sea Drilling Project (DSDP) – are unparalleled and well known among geoscience research communities. In particular, IODP paleoclimate science is exciting, groundbreaking, and provides a strong foundation to understand global climate change today. However, this wealth of information has not been used by – or even made accessible to – many educators who are outside the ocean drilling community.

Making this science accessible to educators was the original motivation for us (St. John and Leckie) to co-lead the science instruction of K-12 teachers for School of Rock in 2005. In 2007, we expanded our collaboration to include another seasoned ocean drilling scientist (Krissek) and experienced educators (Jones and Pound) on an NSF grant designed to make the science of ocean drilling research accessible to college educators. In particular, we developed a set of inquiry-based exercises that use authentic data from scientific ocean drilling to explore the fundamentals and implications of past climate change. Our work has since evolved into a set of exercises that fills an important gap in student-active learning materials on climate change, and that we hope will be a valuable teaching resource for college educators.

After carefully considering several options for dissemination, we decided to publish these exercises as a book, *Reconstructing Earth's Climate History: Inquiry-based Exercises for the Lab and Class* (Wiley-Blackwell), which will be available in December 2011. Our goal for writing this book is to put key data and published case studies of past climate change at college students' fingertips, so that they can experience the nature and process of climate change science.

It is our teaching philosophy that addressing *how we know* is as important as addressing *what we know* about past climate change. The spirit of inquiry that is essential to scientific practice is also essential to student learning. All of the exercises in the book build upon authentic published data, including DSDP-ODP-IODP initial reports and scientific results volumes, ANDRILL reports, and peer-reviewed journal articles. We designed the book to be a practical experience, directing students to evaluate published scientific data, practice developing and testing hypotheses,



***This new Wiley-Blackwell publication can be used in paleoclimatology, paleoceanography, historical geology, and Earth systems courses. The book is to be released in December 2011.***

and infer the broader implications of scientific results. The exercises explore a wide range of topics, including: marine sediments, age determination, stable isotope paleoclimate proxies, the role of CO<sub>2</sub> as a climate regulator, Cenozoic climate change, climate cycles, polar climates, and abrupt warming and cooling events. The book is available at a pre-publication price of \$63.96 (use discount code: VB471). To request an inspection copy contact [LSadoption@wiley.com](mailto:LSadoption@wiley.com) and include the course name and number of students.

Concurrent with the book release this fall, we will lead short courses at GSA and AGU on the book's topics. For more information about these courses please see page 2.



# IODP IN THE NEWS

## Community Expresses Support for Scientific Ocean Drilling

In *Eos*, the weekly newsletter of the American Geophysical Union, articles by Deborah K. Smith and co-authors (vol. 91, no. 43) and Susan Humphris and co-authors (vol. 92, no. 84) focused on the rich history of the scientific ocean drilling programs and emphasized the importance of continued access to the seafloor – through drilling and observatories – to tackle fundamental and societally relevant scientific problems. Mike Bickle (University of Cambridge) and co-authors presented similar views in a *Nature Geoscience* (vol. 4, no. 1) commentary. All the articles highlighted scientific drilling as a unique and powerful tool for investigating the Earth, and looked forward to planning for the post-2013 program.

## Recent Media Coverage of IODP

*A few high-impact media hits from the spring and early summer are summarized below.*

In March, Damon Teagle (University of Southampton), co-chief of IODP Expedition 335 Superfast Spreading Rate Crust 4, was interviewed by Ira Flatow on National Public Radio's *Talk of the Nation: Science Friday* show. The segment is available on NPR's website at [www.npr.org/2011/03/25/134855888/Drilling-To-The-Mantle-Of-The-Earth](http://www.npr.org/2011/03/25/134855888/Drilling-To-The-Mantle-Of-The-Earth).

A History Channel documentary "Journey to the Earth's Core" also aired in March, and featured the work of IODP Expedition 327 Juan De Fuca Ridge Flank Hydrogeology, as well as an interview with Katrina Edwards, co-chief of IODP Expedition 336 Mid-Atlantic Ridge Microbiology.

The Nankai Trough Seismogenic Zone Experiment (NanTroSEIZE) was featured in a June *Men's Journal* article on the future of earthquake preparedness and included comments from Harold Tobin (University of Wisconsin-Madison) and Masataka Kinoshita (JAMSTEC), co-chief project scientists.

Media interest in earthquakes also brought attention to IODP Expedition 334 Costa Rica Seismogenesis Project (CRISP), led by co-chief scientists Paola Vanucchi (University of Florence) and Kohtaro Ujiie (University of Tsukuba). The expedition was covered on MSNBC in a story called "Do Clues to Japan Earthquake Lie Under Costa Rican Seafloor?"

**If you have research papers that are slated for publication, please contact IODP Communications in the U.S. ([IODPcommunications@oceanleadership.org](mailto:IODPcommunications@oceanleadership.org)) so that we can track the program's discoveries and help promote your work and IODP to the scientific community and the media.**



*Co-chief Damon Teagle (left) and Costa Rican scientist Marino Protti (right) at Costa Rican press conference before Expedition 335. Photo courtesy of IODP-USIO*



*Photo courtesy of A. Sutton*

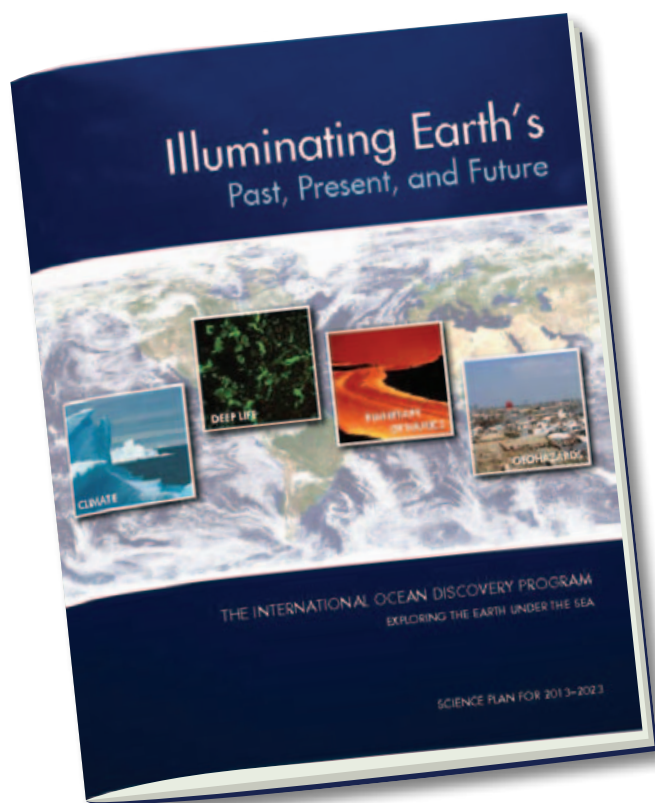
## Making a Difference: USIO Diversity Initiatives

The first IODP-USIO Diversity Internship was awarded to Alexandra Sutton from Baltimore, MD. A graduate of Texas A&M University, Ms. Sutton is working with the IODP Communications group at Ocean Leadership to develop and disseminate new materials that will help heighten IODP's national and international visibility, and further develop her science communication skills. The Diversity Internship is designed to expose minority students to careers in scientific ocean drilling by providing them with a 10-12 week educational and career building experience at one of the institutions that comprises the IODP-USIO. For more information about the internship, including current opportunities, go to [www.oceanleadership.org/education/diversity/iodp-usio-diversity-internship/](http://www.oceanleadership.org/education/diversity/iodp-usio-diversity-internship/).

## A Call to Action

by Susan Humphris, Peter de Menocal, Andrew Fisher, and Demian Saffer

The Science Plan for the International Ocean Discovery Program was published in June. The community produced a compelling document that makes a strong case for multidisciplinary, international collaboration in scientific ocean drilling during the period 2013 to 2023. The new IODP will build upon past successes to address global challenges facing current and future generations.



One of the questions that is often asked is, “so what’s new?” In the next decade, the new IODP will have a major focus on urgent and societally relevant problems, such as climate change and geohazards. It will address cross-cutting topics of immediate and emerging interest, including deep life and carbon storage. It will emphasize multidisciplinary, active experiments – perturbing natural systems and monitoring responses – with stronger links between earth, ocean, and life sciences. IODP will develop new tools and techniques, and exchange technology and ideas through close collaborations with other global programs. And there

will be expanded education and outreach activities, resulting in stronger connections to students and the public at large.

While new is often exciting, it is important to note aspects of the existing program that have made it so successful and that will be retained. First and foremost, the new IODP will empower diverse international communities to make fundamental discoveries through collaboration and access to cutting edge technologies. The program will continue to be driven by proposals from individuals or groups of investigators. There will be rigorous, transparent peer review and nurturing of promising projects, with the best science selected for scheduling. The flexibility to respond to new opportunities and immediate needs will be retained, as shown by the recent formation of a detailed planning group to evaluate rapid response drilling following the March 2011 Tohoku earthquake.

The new Science Plan makes the case for the continuation of scientific ocean drilling beyond 2013, but to ensure this, we all need to act. Here are some of the things you can do:

- Give presentations about your drilling-related research – the exciting science that IODP enables is what sells the program! Add a few slides to your talk about future plans for ocean drilling. Slides and talking points are on the new USSSP website.
- Brief your department at a regular meeting or schedule a brown bag presentation about the new Science Plan. A flexible powerpoint presentation, including a program overview and more detailed slides about each challenge, is available on the new USSSP website.
- Acknowledge DSDP/ODP/IODP as appropriate in presentations and published papers. Include it as a keyword if not in the title. In particular, at the Fall AGU meeting, include the IODP logo on your posters and slides.
- Talk with senior administrators and make them aware of the need for a new drilling program and of its importance to your research, students, and your institution’s educational mission. Provide them with the 12-page Science Plan Summary that is available online or as a hard copy from the Consortium for Ocean Leadership.

*All of the materials discussed above are available on the new USSSP website (<http://iodp-ussp.org>).*

***Community input is important as we work towards a new scientific ocean drilling program. We will keep you updated as this process continues, and welcome your help, input, and ideas on how to spread the word and galvanize the scientific community towards ensuring the future of scientific ocean drilling beyond 2013!***



## COMMUNITY SPOTLIGHT

# MASAKO TOMINAGA

Masako Tominaga's smile is almost ubiquitous in IODP presentations and promotional materials – and for good reason. Tominaga, a postdoctoral scholar at Woods Hole Oceanographic Institution, has sailed on five IODP expeditions (two as a Japanese and three as a U.S. participant). She is a former Schlanger Fellow, and currently serves on the Science and Technology Panel and as a lead proponent on two IODP proposals. She has also been a long-time advocate of encouraging early career scientists to become involved in IODP, including serving as an advisor for the annual "IODP Primer" short course workshop at AGU.

Tominaga, an applied/marine geophysicist, first became fascinated by scientific ocean drilling as a high school student. "I read a book about methane hydrates recovered during an ODP Leg in the Nankai Trough." She became so deeply fascinated with the subject that she contacted the author of the book and went on to pursue her undergraduate degree in petroleum and drilling engineering. In 2001, Tominaga toured the *JOIDES Resolution* in Yokohama with her mother and best friend. "I told myself that I was going to be a scientist on this ship someday," she recalled.

Tominaga kept her promise and as a graduate student at Texas A&M University, she boarded the *JOIDES Resolution* again in 2005 to join her first IODP expedition.

One of the best parts of IODP according to Tominaga is "the unlimited possibilities for international collaboration." Then she added, with a smile and her characteristic passion for geoscience, "It's invaluable for carrying out my research and is absolutely necessary to advancing Earth science."



Photo courtesy of M. Tominaga

## LETTER FROM THE NSF

Dear Colleagues,

The National Science Foundation is continuing its planning efforts for the next phase of scientific ocean drilling while also reviewing past successes, all in preparation for a renewal request to the National Science Board (NSB) in 2012. NSB is the last major milestone towards securing a post-2013 drilling program. The recently released 2013-2023 Science Plan and the upcoming reports from the National Research Council and NSF Advisory Committee for Geoscience will be part of the package of material that the NSB reviews in making its recommendation to the NSF Director. Currently, the drilling program is scheduled to provide an Informational Item at the May 2012 NSB meeting, with an Action Item planned for August 2012.

Although much of our energy has been focused on renewal, we have also been engaging with potential new members of IODP. This summer, NSF staff and representatives from ECORD, MEXT, and IODP-MI traveled to Brazil to meet with delegates from several government ministries to discuss the program. The trip also included a brief scientific workshop with Brazilian scientists. We were pleased by the participants' enthusiastic reception of the program and look forward to continuing to build relationships with our prospective partners.

Finally, we would like to let you know of some recent personnel changes at NSF. This summer, Ian Ridley, ODP Program Director, and Sarah Menassian, ODP Science Assistant, left NSF. Dr. Ridley returned to the USGS in September to serve as Director of the USGS Mineral and Environmental Resources Science Center. In August, Ms. Menassian moved to France to begin her first year of graduate school in volcanology. Dr. Ridley's replacement will be named in the near future and Leonard Pace started as the new Science Assistant on July 18. We would like to welcome our new staff and thank our departing staff for their great service to IODP and wish them the best of luck in their new endeavors.

Sincerely,

**The NSF Team**

(Rodey Batiza, Jamie Allan, Tom Janeczek, Sarah Menassian, and Ian Ridley)



## LETTER FROM THE USAC CHAIR

Dear Colleagues,

One of the side effects of five years as a member of the U.S. Advisory Committee for Scientific Ocean Drilling (USAC) and two years as chair has been an increased awareness of the contributions of IODP to the earth and ocean sciences. I have been struck by how often I encounter results from ocean drilling in papers and presentations. Unfortunately, these results are sometimes presented in such a way that only an ocean drilling scientist would recognize them. How often have you been in a talk, or read a poster, where the only identification of the data source is the site number? When we are talking to other ocean drilling scientists, it is reasonable to assume that they know the program behind that site number. However, many times we forget to add that important information when presenting results to broader audiences. With GSA, AGU, and Ocean Sciences approaching, I ask you to make a special effort to highlight the role of IODP in your presentation. This can be very simple: 1) add "IODP" (or ODP or DSDP) in front of the site number; 2) include the IODP logo on your slides or poster; and, if possible 3) liven up your talk with a picture of or from the ship/drilling platform.

As I rotate off the committee, I am happy to announce that Anthony Koppers of Oregon State University was unanimously selected as the new USAC chair, starting in October 2011. Anthony has a strong record of research on ocean hotspots and volcanic chains. He was recently co-chief scientist on IODP Expedition 333 examining the Louisville Seamount Trail. Anthony has a history of serving the community and has been webmaster for earthref.org for the past decade. With his experience, insight, and dedication, I am certain that Anthony will be an excellent leader of USAC.

Best regards,

**Liz Screaton**

Chair, U.S. Advisory Committee  
for Scientific Ocean Drilling



## USAC MEMBERS

**Liz Screaton (Chair)**

University of Florida

**Gary Acton**

University of California, Davis

**Beth Christensen**

Adelphi University

**Gerald Dickens**

Rice University

**Anthony Koppers**

Oregon State University

**Jon Lewis**

Indiana University of Pennsylvania

**Mitch Lyle**

Texas A&M University

**Heath Mills**

Texas A&M University

**J. Casey Moore**

University of California, Santa Cruz

**Craig Moyer**

Western Washington University

**Stephen Pekar**

Queens College

**Susanne Straub**

Columbia University

## Welcome New USAC Members!

Ocean Leadership would like to welcome **Ivano Aiello** (*Moss Landing Marine Laboratories*), **Gail Christeson** (*University of Texas at Austin*), **John Jaeger** (*University of Florida*), **Yair Rosenthal** (*Rutgers University*), and **Anja Schleicher** (*University of Michigan*) to the U.S. Advisory Committee for Scientific Ocean Drilling. USAC is the national advisory committee for U.S. participation in IODP. It is established through the U.S. Science Support Program and represents the broad community in formulating scientific and policy recommendations. The ocean drilling community thanks new and continuing members for their time and commitment to the program!



# DRILL BITS

## Unlocking the Secrets of Slow Slip Events

Slow slip events are a new class of shear slip that have significant implications for plate boundary processes and the seismic hazards posed by subduction megathrusts. A workshop held in August in Gisborne, New Zealand, discussed theories regarding the origin of slow slip events and how these theories could be physically tested, which requires sampling of material by drilling into the source regions and monitoring temporal changes in seismicity, strain rate, stress, geochemistry of fluids, and hydrological properties. The workshop attendees developed a list of the main scientific questions that could be addressed by drilling and instrumenting slow slip source regions and a strategy for determining the physical processes behind their origin. A workshop report that presents a conceptual framework for using ocean drilling to understand slow slip events will be posted on the U.S. Science Support Program website (<http://iodp-usssp.org>).



Workshop Participants. Photo courtesy of Gisborne Herald.

## Schlanger Ocean Drilling Fellows Announced

The U.S. Science Support Program is pleased to announce the 2011-2012 Schlanger Ocean Drilling Fellows. Each year, the program awards \$28,000 to outstanding graduate students conducting research related to IODP and its predecessor programs. This year's fellows – selected on the quality of their proposed research – will conduct research in topics ranging from climate change to paleomagnetism to microbiology. At the end of their fellowship, the fellows will travel to the Ocean Leadership headquarters in Washington, D.C. to present the results of their research. The 2011-2012 Schlanger Fellows are: Tali Babila (Rutgers University), Fabian Batista (University of California, Santa Cruz), Amanda Oehlert (University of Miami), Alicia Shepard (Texas A&M University), and Huapei Wang (Rutgers University). The next application deadline is November 15, 2011. For more information on the Schlanger Fellowships, visit <http://iodp-usssp.org/research/schlanger-fellowships>.



2010-2011 Schlanger Ocean Drilling Fellows meet with Dr. Kathryn Matthews at the U.S. Department of State during their final meeting in Washington, D.C.

## National Research Committee Reviews IODP

The National Research Council is finishing its review of the scientific accomplishments of U.S.-supported scientific ocean drilling and the program's potential for future transformative scientific discoveries. The review was sponsored by the National Science Foundation to provide an independent assessment of their investment over the past 40 years – from DSDP through IODP – and to provide a look forward as NSF reviews the science community's proposal for a post-2013 drilling program. The NRC report will evaluate how scientific ocean drilling has shaped understanding of the Earth system and history and the extent to which the availability of deep ocean drilling capabilities has enabled new fields of inquiry. It will also include consideration of the drilling programs' contributions to capacity building, science education, and outreach activities. The final report is to be available in late September at [www.nap.edu](http://www.nap.edu).



From the rig floors of the drilling platforms to the desks of member offices worldwide, IODP is a dynamic yet complicated program. This section is designed to explain the “ins and outs” of different aspects of IODP and in each issue, we will select one or two topics to highlight – we invite you to test your IODP knowledge and to learn something new about the program.

## New IODP Science Advisory Structure

IODP evaluates proposals for scientific drilling expeditions and sets ship schedules through a system called the Science Advisory Structure (SAS). The SAS is a series of panels and committees with membership drawn from the international scientific community of IODP. Operating since IODP's predecessor, the Ocean Drilling Program (ODP), the SAS is reviewed every several years for its effectiveness, and the review often results in changes to improve performance and incorporate new programmatic changes. As we transition from the current IODP to the proposed post-2013 program, the SAS is undergoing such a change.

The new SAS begins in October 2011 with the first meeting taking place in December 2011. The principles of the SAS will remain the same as in previous programs, but it will have a simpler structure – particularly with regards to the number of panels that must review a drilling proposal before it can be scheduled. In the old SAS, a drilling proposal climbed a ladder of three panels and committees (the Science Steering and Evaluation Panel, then the Science Planning Committee, and ultimately, the SAS Executive Committee); in the new SAS, the system has been reduced to two steps (from the Proposal Evaluation Panel to the Science Implementation and Policy Committee).

Drilling proposals are first evaluated by the Proposal Evaluation Panel (PEP), which is responsible for evaluating the scientific objectives and technical approach of submitted proposals at all stages, and for forwarding ready-to-drill and top-priority proposals to the Science Implementation and Policy Committee (SIPCOM). The SIPCOM is the executive committee of SAS and is responsible for delivering annual and long-range science operations plans for the program, while striking a balance between geographic and thematic considerations. SIPCOM will also assess overall program success and approve program scientific policies. Support panels reviewing site suitability, environmental safety, and technology will continue in the new SAS, although engineering panels will move from a SAS function to one convened by the ship operators.

We encourage scientists interested in proposing future expeditions to begin familiarizing themselves with the new SAS structure and proposal format and review process by visiting the IODP website ([www.iodp.org/drilling-proposals/](http://www.iodp.org/drilling-proposals/)) or by contacting IODP-MI Science Managers ([science@iodp.org](mailto:science@iodp.org)). Proposals submitted at the next deadline will be important for planning future ship operations and program plans.

## GIVE US YOUR FEEDBACK ABOUT THIS NEWSLETTER

The *Core Discoveries* newsletter was launched in Fall 2010 to provide the U.S. IODP community with information about program developments, community news, expedition results, education and outreach, and opportunities for funding and participation in IODP.

Let us know what you think about this newsletter – tell us what you like and where you see room for improvement. Please email your comments, ideas, and suggestions to [IODPcommunications@oceanleadership.org](mailto:IODPcommunications@oceanleadership.org).

Not yet a subscriber? If you'd like to receive a free printed copy of *Core Discoveries*, send us an email with your name and complete mailing address. Or send us your email address if you'd prefer to receive an electronic copy of the newsletter in PDF format.





Photo courtesy of IODP-USIO

## LETTER FROM THE USIO

Dear Colleagues,

The U.S. Implementing Organization (USIO) logging group at the Lamont-Doherty Earth Observatory (LDEO) has devoted considerable effort over the past 12-18 months on building several innovative and versatile downhole tools for upcoming IODP expeditions. Of special note, the new Multi-Function Telemetry Module (MFTM) allows data collected by third-party tools to be transmitted back to the surface in real time. The MFTM is particularly important for scientific ocean drilling because it allows measurements not collected with conventional devices to use existing recording systems, and even deploy in series with Schlumberger tools. This considerably shortens the development path for third-party instruments, allows principal investigators to concentrate on developing new sensors, and can save rig time.



Dave Goldberg

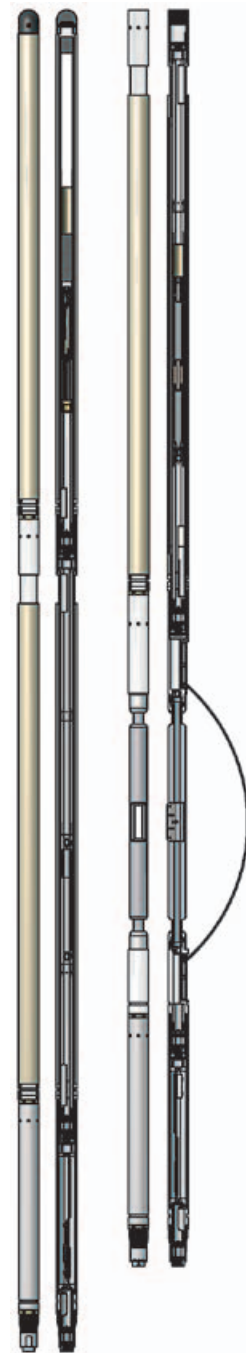
Collaborations with several projects initially sparked the development of the MFTM (which has been led by Gerry Iturrino at LDEO) and include the Dark Energy Biosphere Investigation tool (DEBI-t) with University of Southern California, Jet Propulsion Laboratory, and Photon Systems; the Motion Decoupled Hydraulic Delivery System (MDHDS) with University of Texas at Austin, Massachusetts Institute of Technology, and Mohr Engineering; and the Simple Cabled Instrument for Measuring Parameters (SCIMPI) with University of Rhode Island, Transcend Engineering, and Woods Hole Oceanographic Institution. Scheduled at-sea deployments of the MFTM/DEBI-t are planned for Fall 2011 during IODP Expedition 336 Mid-Atlantic Ridge Microbiology, while deployment of the MFTM/MDHDS is scheduled for Summer 2012 during the transit before IODP Expedition 342 Newfoundland Sediment Drifts.

Other new tool developments at LDEO include two Magnetic Susceptibility Sondes (MSS) replacements and a new borehole Multisensor Magnetometer Module (MMM) that will have sufficient magnetization range to function in both hard rock and in sedimentary formations. On-land tests of both tools will be followed by at-sea deployments of the MSS during the Spring 2012 IODP Expedition 340 Lesser Antilles Volcanism. The first MMM deployment is anticipated later in 2012.

Finally, freshly minted logs have been uploaded to the log database from recent *JOIDES Resolution*, *Chikyu*, and mission-specific platform expeditions. Log data through Expedition 335 is now available online via <http://brg.ldeo.columbia.edu/logdb/>. All data through IODP Expedition 318 is in the public domain; log data from IODP Expeditions 319, 322 (CDEX); 325 (ESO); and 327, 329, 330, 334, and 335 (USIO) will be forthcoming soon. We invite you to use the new data and we look forward to exciting results from these new tool deployments in the future.

Best regards,

Dave Goldberg  
Director, USIO-LDEO





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INDICIA

FSC INFO

## IODP Expedition Schedule

Expedition	#	Port of Origin	Dates
<b>JOIDES Resolution</b>			
Mid-Atlantic Ridge Microbiology	336	Bridgetown, Barbados	16 Sept. – 17 Nov., 2011
Mediterranean Outflow	339	Ponta Delgada, Azores	17 Nov. – 17 Jan., 2012
Atlantis Massif (779 APL)	340T	Lisbon, Portugal	17 Jan. – 6 Feb., 2012
Lesser Antilles Volcanism & Landslides	340	St. John's, Antigua	6 Feb. – 18 March, 2012
Tie-Up			18 March – 18 June, 2012
Newfoundland Paleogene Sediment Drifts	342	St. George, Bermuda	18 June – 17 Aug., 2012
Tie-Up			mid-Aug. – Oct., 2012
Costa Rica Seismogenesis Project (CRISP) 2	344	TBD	Oct. – Dec., 2012
Hess Deep Plutonic Crust	345	TBD	Dec. – Feb., 2013
Tie-Up			Feb. – May, 2013
Southern Alaska Margin Tectonics, Climate & Sedimentation	341	Victoria, Canada	May – July, 2013
Asian Monsoon	346	TBD	July – Sept., 2013
<b>Chikyu</b>			
Deep Coalbed Biosphere off Shimokita	337	TBD	July – Aug., 2012
NanTroSEIZE Plate Boundary Deep Riser - 2	338	TBD	Sept. – Jan., 2013

*Expedition dates, ports of origin, etc. are subject to change.*

*Please see <http://iodp.tamu.edu/scienceops/> and <http://www.iodp.org/expeditions/> for the most up-to-date ship operations schedules.*