

Proceedings of the International Ocean Discovery Program

Volume 372B/375

Hikurangi Subduction Margin Coring, Logging, and Observatories

Expedition 372B/375 of the R/V *JOIDES Resolution*

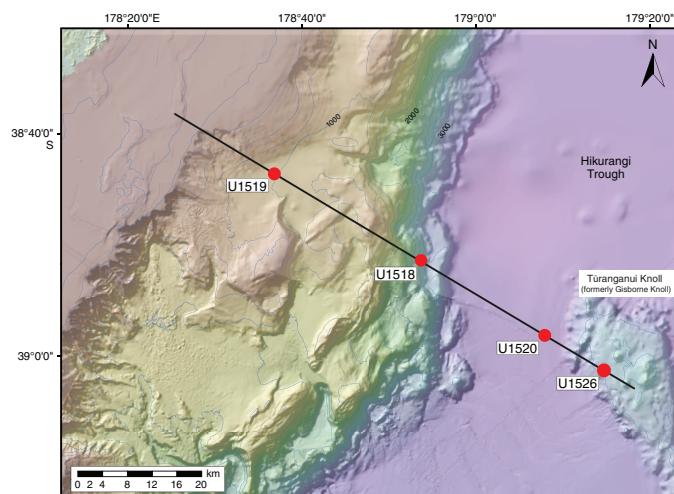
Timaru, New Zealand, to Auckland, New Zealand

Sites U1518–U1520 and U1526

8 March–5 May 2018

Volume authorship

Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists



Publisher's notes

This publication was prepared by the *JOIDES Resolution* Science Operator (JRSO) at Texas A&M University (TAMU) as an account of work performed under the International Ocean Discovery Program (IODP). Funding for IODP is provided by the following international partners:

National Science Foundation (NSF), United States
Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
European Consortium for Ocean Research Drilling (ECORD)
Ministry of Science and Technology (MOST), People's Republic of China
Korea Institute of Geoscience and Mineral Resources (KIGAM)
Australia-New Zealand IODP Consortium (ANZIC)
Ministry of Earth Sciences (MoES), India
Coordination for Improvement of Higher Education Personnel (CAPES), Brazil

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the participating agencies, TAMU, or Texas A&M Research Foundation.

The bulk of the shipboard-collected core data from this expedition is accessible at <http://iodp.tamu.edu/database/index.html>. If you cannot access this site or need additional data, please contact Data Librarian, International Ocean Discovery Program *JOIDES Resolution* Science Operator, Texas A&M University, 1000 Discovery Drive, College Station TX 77845-9547, USA. Tel: (979) 845-8495; Fax: (979) 458-1617; Email: database@iodp.tamu.edu.

A complete set of the logging data collected during the expedition is available at http://mlp.ldeo.columbia.edu/logdb/scientific_ocean_drilling. If you have problems downloading the data, wish to receive additional logging data, or have questions regarding the data, please contact Database Administrator, Borehole Research Group, Lamont-Doherty Earth Observatory of Columbia University, PO Box 1000, 61 Route 9W, Palisades NY 10964, USA. Tel: (845) 365-8343; Fax: (845) 365-3182; Email: logdb@ldeo.columbia.edu.

Supplemental data were provided by the authors and may not conform to IODP publication formats.

JRSO expedition photos are the property of IODP and are public access.

Some core photographs have been tonally enhanced to better illustrate particular features of interest. High-resolution images are available upon request.

Cover photograph shows wellhead of ACORK/CORK-II nested observatory deployed at Site U1518. The CORK was named "Te Matakite," which means "to see into the future" in Māori. Photo credit: Demian Saffer and IODP JRSO.

Copyright

Except where otherwise noted, this work is licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0) license (<https://creativecommons.org/licenses/by/4.0/>). Unrestricted use, distribution, and reproduction are permitted, provided the original author and source are credited.



Examples of how to cite this volume or part of this volume are available at http://publications.iodp.org/proceedings/372B_375/372B375title.html#bib.

ISSN

World Wide Web: 2377-3189

Volume DOI

<https://doi.org/10.14379/iodp.proc.372B375.2019>

Publication date

5 May 2019

Contents

Expedition reports

Chapters

[Expedition 372B/375 summary](#)

D.M. Saffer et al.

[Expedition 372B/375 methods](#)

L.M. Wallace et al.

[Site U1518](#)

D.M. Saffer et al.

[Site U1519](#)

P.M. Barnes et al.

[Site U1520](#)

P.M. Barnes et al.

[Site U1526](#)

L.M. Wallace et al.

Core descriptions

Visual core descriptions (VCDs) are presented in PDF files for each site. Smear slides and/or thin sections are presented in PDF and/or CSV files for each site and/or hole (CSV files are available in the CORES directory). The entire set of core images in PDF is available in the IMAGES directory.

[Site U1518](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

[Site U1519](#)

[Visual core descriptions](#) · Smear slides

[Site U1520](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

[Site U1526](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

Supplementary material

Supplementary material for the Volume 372B/375 expedition reports includes DESClogik workbooks, layer thickness data, and structure calculations in Microsoft Excel format, structure spreadsheet notes in Microsoft Word format, and smear slide log sheets and handwritten VCDs in PDF. A full list of directories can be found in SUPP_MAT in the volume zip folder or on the [Supplementary material for Volume 372B/375 expedition reports](#) web page.

Expedition research results

Data reports

Titles are available in [HTML](#).

Syntheses

Titles are available in [HTML](#).

Drilling location maps

A site map showing the drilling locations for this expedition and maps showing the drilling locations of all International Ocean Discovery Program (IODP) expeditions, produced using QGIS (<http://www.qgis.org>), and all Integrated Ocean Drilling Program, Ocean Drilling Program (ODP), and Deep Sea Drilling Project (DSDP) expeditions, produced using Generic Mapping Tools (GMT) of Paul Wessel and Walter H.F. Smith (<http://gmt.soest.hawaii.edu>), are available in PDF.

[IODP Expedition 372B/375 site map](#)

[IODP map](#) (Expeditions 349–357, 359–372, 374–375, and 380–381)

[Integrated Ocean Drilling Program map](#) (Expeditions 301–348)

[ODP map](#) (Legs 100–210)

[DSDP map](#) (Legs 1–96)

Acknowledgments

The success of International Ocean Discover Program (IODP) Expeditions 372 and 375 hinged on the dedication, support, and professionalism of the staff and crew aboard the R/V *JOIDES Resolution* and the *JOIDES Resolution* Science Operator (JRSO) technical staff. We acknowledge their pivotal contributions in accomplishing the objectives of the Hikurangi margin drilling program. They ensured that operations went smoothly with very few major issues, and when issues did arise, they addressed them quickly. This was key to achieving nearly 100% of our operational targets. We also acknowledge support from many other IODP staff before, during, and after the expedition, particularly in planning operations and observatory installations.

Because of the complex and varied objectives of this drilling program, both expeditions involved multiple years of planning with heavy involvement from many IODP staff, most notably Katerina Petronotis, Kevin Grigar, Bill Rhinehart, John van Hyfte, Mike Storms, and Steve Midgely. We also gratefully acknowledge Hans Jannasch, Earl Davis, Tom Pettigrew, and Keir Becker for sharing their extensive knowledge during the design and planning phases of the observatories and Earl and Hans for constructing, designing, and testing some of the components.

We are also grateful to the United States National Science Foundation (NSF) for funding support of the CORK observatories and for supporting the planning, design, and fabrication efforts well in advance of drilling. This lead time was critical to the success of the expeditions.

We thank Dan Bassett, Greg Foothead, and the captain and crew of the R/V *Tangaroa* for facilitating delivery of some observatory components to *JOIDES Resolution* at sea during Expedition 375.

The IODP expeditions at the Hikurangi margin were the culmination of decades of a diverse array of surveys and research on the offshore Hikurangi margin and the slip behavior that occurs there. In particular, we thank the GeoNet project (<https://www.geonet.org.nz>; funded by the New Zealand Earthquake Commission and Land Information New Zealand), which operates the continuous GPS and seismic monitoring network that enabled the discovery of shallow slow slip events at the northern Hikurangi margin, thus motivating these expeditions. The tectonic and geological framework of the drilling transect for Expeditions 372 and 375 was underpinned by numerous seismic imaging and multibeam bathymetric expeditions led by scientists from New Zealand, the United States, and Europe. In particular, we gratefully acknowledge Phil Barnes, Rupert Sutherland, Stuart Henrys, Dan Barker, Joshu Mountjoy, Sebastian Krastel, Rob Harris, Anne Trehu, Rebecca Bell, Melissa Gray, Joanna Morgan, Andrea Plaza-Faverola, Dan Bassett, Steve Wilcox, John Mitchell, and Susi Woelz for their various contributions to seismic and bathymetric acquisition, processing, and/or interpretations of these data sets that provided a framework for the drilling transect and were critical for drill site characterization and safety evaluation. We are grateful to the funding agencies that supported the acquisition of site survey and regional geophysical and bathymetric data, including the New Zealand Ministry of Business, Innovation, and Employment (MBIE), New Zealand Ocean Survey 20/20 program, National Institute of Water & Atmospheric Research (NIWA), GNS Science, German Science Foundation, and NSF.

The IODP proposals that formed the basis for Expeditions 372 and 375 emerged from a series of workshops and meetings that involved a dedicated proponent group who were key contributors to the proposals, and members of the drilling proponent team provided continued input and guidance throughout the planning and implementation of the expeditions. We acknowledge the New Zealand MBIE, U.S. Science Support Program, New Zealand Earthquake Commission, and NSF for support of these workshops.

We also thank Stuart Henrys for his help in assembling materials for the IODP Environmental Protection and Safety Panel (EPSP) and for providing advice to Mitch Malone, who successfully dealt with the New Zealand environmental protection regulations and clearance requirements that were needed to undertake the drilling expedition.

Finally, we are grateful to IODP and the *JOIDES Resolution* Facility Board for supporting this complex project. We hope that it will help further build on the extensive legacy of IODP in illuminating fundamental and societally relevant processes that shape our planet.

Foreword

The International Ocean Discovery Program (IODP) represents the latest incarnation of almost five decades of scientific ocean drilling excellence and is generally accepted as the most successful international collaboration in the history of the Earth sciences. IODP builds seamlessly on the accomplishments of previous phases: the Deep Sea Drilling Project, Ocean Drilling Program, and Integrated Ocean Drilling Program. The 2013–2023 IODP Science Plan (*Illuminating Earth's Past, Present, and Future*) defines four themes and thirteen challenges for this decade of scientific ocean drilling that are both of fundamental importance in understanding how the Earth works and of significant relevance to society as the Earth changes, at least in part in response to anthropogenic forcing. This phase of IODP represents a renewed level of international collaboration in bringing diverse drilling platforms and strategies to increasing our understanding of climate and ocean change, the deep biosphere and evolution of ecosystems, connections between Earth's deep processes and surface manifestations, and geologically induced hazards on human timeframes.

The *Proceedings of the International Ocean Discovery Program* presents the scientific and engineering results of IODP drilling projects, expedition by expedition. As in the preceding Integrated Ocean Drilling Program, expeditions in the new IODP are conducted by three implementing organizations, each providing a different drilling capability. These are the US Implementing Organization (USIO; through September 2014) and the *JOIDES Resolution* Science Operator (JRSO; as of October 2014), providing the leased commercial vessel *JOIDES Resolution* for riserless drilling operations; JAMSTEC's Center for Deep Earth Exploration (CDEX), providing the drillship *Chikyu* for riser and occasional riserless operations; and the European Consortium for Ocean Research Drilling (ECORD) Science Operator (ESO), providing "mission-specific" platforms (MSPs) for expeditions that extend the IODP operational range where neither drillship is suitable, for example, in polar environments and in shallow waters. Scheduling decisions for each capability are made by three independent Facility Boards, each of which includes scientists, operators, and platform funding partners: the *JOIDES Resolution* Facility Board (JRFB), *Chikyu* IODP Board (CIB), and ECORD Facility Board (EFB). At the beginning of the new IODP, the three Facility Boards agreed to utilize Publication Services at the USIO and now the JRSO for production of all expedition *Proceedings* volumes and reports.

The new IODP differs from prior scientific ocean drilling programs in that it has neither a central management organization nor commingled funding for program-wide activities. Yet this phase of IODP retains a fundamental integrative structural element: a "bottom-up" evaluation of all proposals for drilling expeditions by a single advisory structure composed of scientists representing all international program partners. International scientists may submit drilling proposals to the Science Support Office; all submitted proposals are then evaluated by a Science Evaluation Panel in the context of the Science Plan.

The new IODP also has a second internationally integrative level for high-level discussion and consensus-building: the IODP Forum. The Forum is charged with assessing program-wide progress toward achieving the Science Plan. At present, IODP involves 26 international financial partners, including the United States, Japan, an Australia/New Zealand consortium (ANZIC), Brazil, China, India, South Korea, and the eighteen members of ECORD (Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, and the United Kingdom). This enhanced membership in the new IODP represents a remarkable level of international collaboration that remains one of the greatest ongoing strengths of scientific ocean drilling.

James A. Austin Jr.
Chair, IODP Forum

International Ocean Discovery Program

JOIDES Resolution Science Operator

Website: <http://iodp.tamu.edu>

IODP JRSO

International Ocean Discovery Program
Texas A&M University
1000 Discovery Drive
College Station TX 77845-9547
USA
Tel: (979) 845-2673; Fax: (979) 845-4857
Email: information@iodp.tamu.edu

IODP JRSO Curation and Laboratories

IODP Gulf Coast Repository (GCR)
Texas A&M University
1000 Discovery Drive
College Station TX 77845-9547
USA
Tel: (979) 845-8490; Fax: (979) 845-1303
Email: rumford@iodp.tamu.edu

European Consortium for Ocean Research Drilling, Science Operator (ESO)

Website: <http://www.ecord.org>

IODP ESO Coordinator: Science, Logistics, and Operations

British Geological Survey
The Lyell Centre
Research Avenue South
Edinburgh EH14 4AP
United Kingdom
Tel: (44) 131-667-1000; Fax: (44) 131-668-4140
Email: eso@bgs.ac.uk

IODP ESO Curation and Laboratories

IODP Bremen Core Repository (BCR)
Center for Marine Environmental Sciences (MARUM)
University of Bremen
Leobener Strasse
28359 Bremen
Germany
Tel: (49) 421-218-65560; Fax: (49) 421-218-98-65560
Email: bcr@marum.de

IODP ESO Petrophysics

European Petrophysics Consortium
Department of Geology
University of Leicester
Leicester LE1 7RH
United Kingdom
Tel: (44) 116-252-3611; Fax: (44) 116-252-3918
Email: sjd27@leicester.ac.uk

Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

Website: <http://www.jamstec.go.jp/chikyu/e>

IODP Japan Science Operator

Center for Deep Earth Exploration (CDEX)
Japan Agency for Marine-Earth Science and Technology
Yokohama Institute for Earth Sciences
3175-25 Showa-machi
Kanazawa-ku, Yokohama
Kanagawa 236-0001
Japan
Tel: (81) 45-778-5643; Fax: (81) 45-778-5704
Email: cdex@jamstec.go.jp

IODP Japan Curation and Laboratories

IODP Kochi Institute for Core Sample Research (KCC)
Japan Agency for Marine-Earth Science and Technology
200 Monobe Otsu
3175-25 Showa-machi
Nankoku City, Kochi 783-8502
Japan
Tel: (81) 88-864-6705; Fax: (81) 88-878-2192
Email: kcc.contact@jamstec.go.jp

Expedition 372B/375 participants*

Expedition 372 scientists

Ingo A. Pecher

Co-Chief Scientist

School of Environmental and Marine Sciences
University of Auckland
New Zealand
i.pecher@auckland.ac.nz

Philip M. Barnes

Co-Chief Scientist

Ocean Geology
National Institute of Water and Atmospheric Research (NIWA)
New Zealand
philip.barnes@niwa.co.nz

Leah J. LeVay

Expedition Project Manager/Staff Scientist

International Ocean Discovery Program
Texas A&M University
USA
levay@iodp.tamu.edu

Sylvain M. Bourlange

Physical Properties Specialist

Ecole Nationale Supérieure de Géologie-Laboratoire
geoRessources
Université de Lorraine
France
sylvain.bourlange@univ-lorraine.fr

Morgane M.Y. Brunet

Sedimentologist

MARUM-Center for Marine Environmental Sciences
University of Bremen
Germany

Present affiliation (1 January 2019):

University of Rennes 1

France

morganebrunet@hotmail.com

Sebastian Cardona

Sedimentologist

Department of Geology and Geological Engineering
Colorado School of Mines
USA
scardona@mines.edu

Michael B. Clennell

Physical Properties Specialist/Downhole Measurements

Energy
CSIRO
Australia
ben.clennell@csiro.au

Ann E. Cook

Physical Properties Specialist/Downhole Measurements

School of Earth Sciences
Ohio State University
USA
cook.1129@osu.edu

Brandon Dugan

Physical Properties Specialist/Downhole Measurements

Department of Geophysics
Colorado School of Mines
USA
dugan@mines.edu

Judith Elger

Physical Properties Specialist/Downhole Measurements

Helmholtz Centre for Ocean Research Kiel
Christian-Albrechts-Universität zu Kiel (IFM)
Germany
jelger@geomar.de

Davide Gamboa

Physical Properties Specialist/Downhole Measurements

British Geological Survey-Wales
United Kingdom
davide@bgs.ac.uk

Aggeliki Georgioupolou

Sedimentologist

UCD School of Earth Sciences
University College Dublin
Ireland

Present affiliation (1 February 2019):
School of Environment and Technology
University of Brighton
United Kingdom
A.Georgioupolou@brighton.ac.uk

Shuoshuo Han

Physical Properties Specialist/Downhole Measurements

Institute for Geophysics
The University of Texas at Austin
USA
han@ig.utexas.edu

Katja U. Heeschen

Organic Geochemist/Pressure Coring Specialist

GFZ German Research Centre for Geosciences
Germany
katja.heeschen@gfz-potsdam.de

*Affiliations at time of expedition, except where updated by participants.

Gaowei Hu
Physical Properties Specialist

Gas Hydrate Department
Qingdao Institute of Marine Geology
China
hgw-623@163.com

Gil Young Kim
Physical Properties Specialist/Downhole Measurements

Marine Geology and Exploration Center
Korea Institute of Geoscience & Mineral Resources (KIGAM)
Republic of Korea
gykim@kigam.re.kr

Hiroaki Koge
Physical Properties Specialist/Downhole Measurements

Graduate School of Frontier Sciences/Atmosphere and Ocean
Research Institute
University of Tokyo
Japan

Present affiliation (18 April 2018):
Marine Geology Research Group
Geological Survey of Japan
National Institute of Advanced Industrial Science
and Technology (AIST)
Japan
koge.h@aist.go.jp

Karina S. Machado
Organic Geochemist

Production Engineering Department
Federal University of Paraná
Brazil
karinascurupa@gmail.com

David D. McNamara
Physical Properties Specialist/Downhole Measurements

Earth and Ocean Sciences
School of Natural Sciences
National University of Ireland, Galway
Ireland
david.d.mcnamara@nuigalway.ie

Gregory F. Moore
Physical Properties Specialist/Downhole Measurements

Department of Geology and Geophysics/SOEST
University of Hawaii at Manoa
USA
gmoore@hawaii.edu

Joshu J. Mountjoy
Sedimentologist/Structural Geologist/New Zealand Observer
National Institute of Water and Atmospheric Research (NIWA)
New Zealand
joshu.mountjoy@niwa.co.nz

Michael A. Nole
Physical Properties Specialist

Hildebrand Department of Petroleum and Geosystems
Engineering
University of Texas at Austin
USA

Present affiliation (1 July 2018):
Applied Systems Analysis and Research
Sandia National Laboratories
USA
mnole@sandia.gov

Satoko Owari
Inorganic Geochemist

Department of Earth Sciences
Chiba University
Japan

Present affiliation (2 April 2018):
School of Marine Resources and Environment
Tokyo University of Marine Science and Technology
Japan
sowari0@kaiyodai.ac.jp

Matteo Paganoni
Physical Properties Specialist/Downhole Measurements

Department of Earth Sciences
University of Oxford
United Kingdom

Present affiliation (1 July 2018):
Shell Global Solutions International, B.V.
Netherlands
matte89paga@gmail.com

Paula S. Rose
Inorganic Geochemist

Physical and Environmental Sciences
Texas A&M University-Corpus Christi
USA
paula.rose@tamucc.edu

Elizabeth J. Screamton
Physical Properties Specialist/Downhole Measurements

Department of Geological Sciences
University of Florida
USA
screamton@ufl.edu

Uma Shankar
Physical Properties Specialist/Downhole Measurements

Department of Geophysics
Institute of Science
Banaras Hindu University
India
umashankar@bhu.ac.in

Marta E. Torres
Inorganic Geochemist
College of Earth, Ocean and Atmospheric Sciences
Oregon State University
USA
mtorres@coas.oregonstate.edu

Xiujuan Wang
Physical Properties Specialist/Downhole Measurements
Key Laboratory of Marine Geology and Environment
Institute of Oceanology, Chinese Academy of Sciences
China
wangxiujuan@ms.qdio.ac.cn

Expedition 372 education and outreach

Stephanie M. Sharuga
Education Officer
National Oceanic and Atmospheric Administration (NOAA)
USA
ssharuga@outlook.com

Erin K. Todd
Education Officer
Department of Geology
University of Otago
New Zealand
erin.todd@otago.ac.nz

Expedition 375 scientists

Demian M. Saffer
Co-Chief Scientist
Department of Geosciences
The Pennsylvania State University
USA
dms45@psu.edu

Laura M. Wallace
Co-Chief Scientist
Tectonophysics Department
GNS Science
New Zealand
l.wallace@gns.cri.nz

Katerina E. Petronotis
Expedition Project Manager/Staff Scientist
International Ocean Discovery Program
Texas A&M University
USA
petronotis@iodp.tamu.edu

Philip M. Barnes
Core-Log-Seismic Integration Specialist
Ocean Geology
National Institute of Water and Atmospheric Research (NIWA)
New Zealand
philip.barnes@niwa.co.nz

Rebecca E. Bell
Core-Log-Seismic Integration Specialist
Geology and Geophysics
Imperial College London
United Kingdom
rebecca.bell@imperial.ac.uk

Martin P. Crundwell
Micropaleontologist (foraminifers)/Observer
Paleontology and Environmental Change Section
GNS Science
New Zealand
m.crundwell@gns.cri.nz

Christie H. Engelmann de Oliveira
Sedimentologist
Programa de Pós-Graduação em Geologia
Universidade do Vale do Rio dos Sinos
Brazil
christie.oliveira10@gmail.com

Ake Fagereng
Structural Geologist
School of Earth and Ocean Sciences
Cardiff University
United Kingdom
fagerengA@cardiff.ac.uk

Patrick M. Fulton
Petrophysics (downhole measurements)/Observatory Specialist
Department of Geology and Geophysics
Texas A&M University
USA
Present affiliation (1 January 2019):
Department of Earth and Atmospheric Sciences
Cornell University
USA
pfulton@cornell.edu

Annika Greve
Paleomagnetist
R&D Center for Ocean Drilling Science (ODS)
Japan Agency for Marine-Earth Science and Technology
(JAMSTEC)
Japan
Annika.Greve@jamstec.go.jp

Robert N. Harris
Petrophysics (physical properties/downhole measurements) Specialist
College of Earth, Ocean and Atmospheric Sciences
Oregon State University
USA
rharris@coas.oregonstate.edu

Yoshitaka Hashimoto
Sedimentologist
Department of Natural Environmental Science
Kochi University
Japan
hassy@kochi-u.ac.jp

Andre Hüpers
Inorganic Geochemist
MARUM
University of Bremen
Germany
ahuepers@uni-bremen.de

Matt J. Ikari
Petrophysics (physical properties) Specialist
MARUM
University of Bremen
Germany
mikari@marum.de

Yoshihiro Ito
Petrophysics (physical properties) Specialist
Disaster Prevention Research Institute
Kyoto University
Japan
ito.yoshihiro.4w@kyoto-u.ac.jp

Hiroko Kitajima
Petrophysics (physical properties) Specialist
Department of Geology and Geophysics
Texas A&M University
USA
kitaji@tamu.edu

Steffen Kutterolf
Sedimentologist
Helmholtz Centre for Ocean Research Kiel
Germany
skutterolf@geomar.de

Hikweon Lee
Petrophysics (physical properties) Specialist
Climate Change Mitigation and Sustainability
Korea Institute of Geoscience and Mineral Resources (KIGAM)
Republic of Korea
hklee@kigam.re.kr

Xuesen Li
Paleomagnetist
College of Earth Science
Guilin University of Technology
China
lixuesen2000@sina.com

Min Luo
Inorganic Geochemist
Hadal Science and Technology Research Center
College of Marine Sciences
Shanghai Ocean University
China
mluo@shou.edu.cn

Pierre R. Malie
Organic Geochemist
Geosciences Montpellier Laboratory
Université Montpellier
France
pierre.malie@gm.univ-montp2.fr

Francesca Meneghini
Sedimentologist
Dipartimento di Scienze della Terra
Università degli Studi di Pisa
Italy
meneghini@dst.unipi.it

Julia K. Morgan
Structural Geologist
Department of Earth Science
Rice University
USA
morganj@rice.edu

Atsushi Noda
Sedimentologist
Research Institute of Geology and Geoinformation
National Institute of Advanced Industrial Science and
Technology (AIST)
Geological Survey of Japan
Japan
a.noda@aist.go.jp

Hannah S. Rabinowitz
Sedimentologist
Lamont-Doherty Earth Observatory
Columbia University
USA
Present affiliation (1 June 2018):
Department of Earth, Environmental, and Planetary Sciences
Brown University
USA
hanna_rabinowitz@brown.edu

Heather M. Savage
Structural Geologist
Lamont-Doherty Earth Observatory
Columbia University
USA
hsavage@ldeo.columbia.edu

Claire L. Shepherd
Micropaleontologist (nannofossils)
Paleontology and Environmental Change Section
GNS Science
New Zealand
c.shepherd@gns.cri.nz

Srisharan Shreedharan
Petrophysics (downhole measurements) Specialist
Department of Geosciences
The Pennsylvania State University
USA
srisharan@psu.edu

Evan A. Solomon
Inorganic Geochemist/Observatory Specialist
School of Oceanography
University of Washington
USA
esolomn@uw.edu

Expedition 375 education and outreach

Thanos A. Fatouros
Outreach Officer
USA
thanos.fatouros@gmail.com

Michael B. Underwood
Sedimentologist
Department of Earth and Environmental Science
New Mexico Institute of Mining and Technology
USA
underwoodm@missouri.edu

Maomao Wang
Structural Geologist
College of Oceanography
Hohai University
China
wangmm@hhu.edu.cn

Adam D. Woodhouse
Micropaleontologist (foraminifers)
School of Earth and Environment
University of Leeds
United Kingdom
eadw@leeds.ac.uk

Aliki Weststrate
Outreach Officer
New Zealand
aliki@outerreaches.co.nz

Operational and technical staff

Siem Offshore AS officials

Jacob C. Robinson
Master of the Drilling Vessel

Mark Robinson
Drilling Supervisor

JRSO shipboard personnel and technical representatives

Expedition 372

Robert Aduddell
Engineer

David Fackler
Applications Developer

Susan Boehm
Thin Section Laboratory

Timothy Fulton
Senior Imaging Specialist

Inva Braha
Curatorial Specialist

Clayton Furman
Logging Engineer

Ty Cobb
Physical Properties Laboratory

Randy Gjesvold
Marine Instrumentation Specialist

Lisa Crowder
Assistant Laboratory Officer

Kevin Grigar
Operations Superintendent

Aaron de Loach
Core Laboratory

Sandra Herrmann
Assistant Laboratory Officer

Lachlan Douglass
LWD Engineer

Michael Hodge
Marine Computer Specialist

Keith Dupuis
Underway Geophysics Laboratory/Downhole Tools Laboratory

Jon Howell
Applications Developer

Minh Huynh

Marine Computer Specialist

Rhonda Kappeler

Publications Specialist

Nicolette Lawler

X-Ray Laboratory

Aaron Mechler

Chemistry Laboratory

Mike Meiring

Engineer

Expedition 375

Susan Boehm

X-Ray Laboratory

Lisa Brandt

Chemistry Laboratory

Ty Cobb

Physical Properties Laboratory

Lisa Crowder

Laboratory Officer

Aaron de Loach

Assistant Laboratory Officer

Ekanta Desai

Publications Specialist

Keith Dupuis

Underway Geophysics Laboratory

Timothy Fulton

Senior Imaging Specialist

Clayton Furman

Logging Engineer

Randy Gjesvold

Marine Instrumentation Specialist

Kevin Grigar

Operations Superintendent

Sandra Herrmann

Assistant Laboratory Officer

Michael Hodge

Marine Computer Specialist

William Mills

Laboratory Officer

Beth Novak

Paleomagnetism Laboratory

David Pedulla

LWD Engineer

Gerrick Van Rensburg

Marine Instrumentation Specialist

Liam Warda

LWD Engineer

Minh Huynh

Marine Computer Specialist

Nicolette Lawler

X-Ray Laboratory

Aaron Mechler

Chemistry Laboratory

Mike Meiring

Engineer

Algie Morgan

Application Developer

Beth Novak

Paleomagnetism Laboratory

William Rhinehart

Engineer

Catherine Smith

Curatorial Specialist

Larry Tuttle

Core Laboratory (temporary)

John Van Hyfte

Engineer

Gerrick Van Rensburg

Marine Instrumentation Specialist

Hai (James) Zhao

Application Developer

IODP Publication Services staff*

Douglas Cummings
Graphics Specialist II

Gudelia (“Gigi”) Delgado
Publications Coordinator

Ekanta Desai
Graphics Specialist II

Patrick H. Edwards
Production Editor IV

Jaime A. Gracia
Supervisor of Production and Graphics

Jenni Hesse
Editor IV

Rhonda Kappler
Graphics Specialist IV

Shana C. Lewis
Editor III

Ginny Lowe
Reports Coordinator

Amy McWilliams
Supervisor of Editing

Julie Myers
Production Editor II

Lorri Peters
Manager of Publication Services

Sandi Sherar Ruddick
Editor II

Kenneth Sherar
Production Editor III

Alyssa Stephens
Graphics Specialist III

Crystal Wolfe
Production Editor III

Jean Wulfson
Graphics Specialist III

Ann Yeager
Distribution Specialist

*At time of publication.

Expedition-related bibliography*

IODP publications

Scientific Prospectus

Saffer, D.M., Wallace, L.M., and Petronotis, K., 2017. *Expedition 375 Scientific Prospectus: Hikurangi Subduction Margin Coring and Observatories*. International Ocean Discovery Program. <http://dx.doi.org/10.14379/iodp.sp.375.2017>

Preliminary Report

Saffer, D.M., Wallace, L.M., Petronotis, K., and the Expedition 375 Scientists, 2018. *Expedition 375 Preliminary Report: Hikurangi Subduction Margin Coring and Observatories*. International Ocean Discovery Program. <https://doi.org/10.14379/iodp.pr.375.2018>

Proceedings volume

Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, 2019. *Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.372B375.2019>

Expedition reports

Saffer, D.M., Wallace, L.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., Bell, R.E., Crundwell, M.P., Engelmann de Oliveira, C.H., Fagereng, A., Fulton, P.M., Greve, A., Harris, R.N., Hashimoto, Y., Hüpers, A., Ikari, M.J., Ito, Y., Kitajima, H., Kutterolf, S., Lee, H., Li, X., Luo, M., Malie, P.R., Meneghini, F., Morgan, J.K., Noda, A., Rabinowitz, H.S., Savage, H.M., Shepherd, C.L., Shreedharan, S., Solomon, E.A., Underwood, M.B., Wang, M., Woodhouse, A.D., Bourlange, S.M., Brunet, M.M.Y., Cardona, S., Clennell, M.B., Cook, A.E., Dugan, B., Elger, J., Gamboa, D., Georgioupolou, A., Han, S., Heeschen, K.U., Hu, G., Kim, G.Y., Koge, H., Machado, K.S., McNamara, D.D., Moore, G.F., Mountjoy, J.J., Nole, M.A., Owari, S., Paganoni, M., Rose, P.S., Screamton, E.J., Shankar, U., Torres, M.E., Wang, X., and Wu, H.-Y., 2019. Expedition 372B/375 summary. In Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, *Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.372B375.101.2019>

Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., Bell, R.E., Crundwell, M.P., Engelmann de Oliveira, C.H., Fagereng, A., Fulton, P.M., Greve, A., Harris, R.N., Hashimoto, Y., Hüpers, A., Ikari, M.J., Ito, Y., Kitajima, H., Kutterolf, S., Lee, H., Li, X., Luo, M., Malie, P.R., Meneghini, F., Morgan, J.K., Noda, A., Rabinowitz, H.S., Savage, H.M., Shepherd, C.L., Shreedharan, S., Solomon, E.A., Underwood, M.B., Wang, M., Woodhouse, A.D., Bourlange, S.M., Brunet, M.M.Y., Cardona, S., Clennell, M.B., Cook, A.E., Dugan, B., Elger, J., Gamboa, D., Georgioupolou, A., Han, S., Heeschen, K.U., Hu, G., Kim, G.Y., Koge, H., Machado, K.S., McNamara, D.D., Moore, G.F., Mountjoy, J.J., Nole, M.A., Owari, S., Paganoni, M., Rose, P.S., Screamton, E.J., Shankar, U., Torres, M.E., Wang, X., and Wu, H.-Y., 2019. Expedition 372B/375 methods. In Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, *Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.372B375.102.2019>

International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.372B375.102.2019>

Saffer, D.M., Wallace, L.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., Bell, R.E., Crundwell, M.P., Engelmann de Oliveira, C.H., Fagereng, A., Fulton, P.M., Greve, A., Harris, R.N., Hashimoto, Y., Hüpers, A., Ikari, M.J., Ito, Y., Kitajima, H., Kutterolf, S., Lee, H., Li, X., Luo, M., Malie, P.R., Meneghini, F., Morgan, J.K., Noda, A., Rabinowitz, H.S., Savage, H.M., Shepherd, C.L., Shreedharan, S., Solomon, E.A., Underwood, M.B., Wang, M., Woodhouse, A.D., Bourlange, S.M., Brunet, M.M.Y., Cardona, S., Clennell, M.B., Cook, A.E., Dugan, B., Elger, J., Gamboa, D., Georgioupolou, A., Han, S., Heeschen, K.U., Hu, G., Kim, G.Y., Koge, H., Machado, K.S., McNamara, D.D., Moore, G.F., Mountjoy, J.J., Nole, M.A., Owari, S., Paganoni, M., Rose, P.S., Screamton, E.J., Shankar, U., Torres, M.E., Wang, X., and Wu, H.-Y., 2019. Site U1518. In Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, *Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.372B375.103.2019>

Barnes, P.M., Wallace, L.M., Saffer, D.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., Bell, R.E., Crundwell, M.P., Engelmann de Oliveira, C.H., Fagereng, A., Fulton, P.M., Greve, A., Harris, R.N., Hashimoto, Y., Hüpers, A., Ikari, M.J., Ito, Y., Kitajima, H., Kutterolf, S., Lee, H., Li, X., Luo, M., Malie, P.R., Meneghini, F., Morgan, J.K., Noda, A., Rabinowitz, H.S., Savage, H.M., Shepherd, C.L., Shreedharan, S., Solomon, E.A., Underwood, M.B., Wang, M., Woodhouse, A.D., Bourlange, S.M., Brunet, M.M.Y., Cardona, S., Clennell, M.B., Cook, A.E., Dugan, B., Elger, J., Gamboa, D., Georgioupolou, A., Han, S., Heeschen, K.U., Hu, G., Kim, G.Y., Koge, H., Machado, K.S., McNamara, D.D., Moore, G.F., Mountjoy, J.J., Nole, M.A., Owari, S., Paganoni, M., Rose, P.S., Screamton, E.J., Shankar, U., Torres, M.E., Wang, X., and Wu, H.-Y., 2019. Site U1519. In Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, *Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.372B375.104.2019>

Barnes, P.M., Wallace, L.M., Saffer, D.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., Bell, R.E., Crundwell, M.P., Engelmann de Oliveira, C.H., Fagereng, A., Fulton, P.M., Greve, A., Harris, R.N., Hashimoto, Y., Hüpers, A., Ikari, M.J., Ito, Y., Kitajima, H., Kutterolf, S., Lee, H., Li, X., Luo, M., Malie, P.R., Meneghini, F., Morgan, J.K., Noda, A., Rabinowitz, H.S., Savage, H.M., Shepherd, C.L., Shreedharan, S., Solomon, E.A., Underwood, M.B., Wang, M., Woodhouse, A.D., Bourlange, S.M., Brunet, M.M.Y., Cardona, S., Clennell, M.B., Cook, A.E., Dugan, B., Elger, J., Gamboa, D., Georgioupolou, A., Han, S., Heeschen, K.U., Hu, G., Kim, G.Y., Koge, H., Machado, K.S., McNamara, D.D., Moore, G.F., Mountjoy, J.J., Nole, M.A., Owari, S., Paganoni, M., Rose, P.S., Screamton, E.J., Shankar, U., Torres, M.E., Wang, X., and Wu, H.-Y., 2019. Site U1520. In Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, *Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.372B375.105.2019>

*The Expedition-related bibliography is continually updated online (http://publications.iodp.org/proceedings/372B_375/372B375title.html#bib). Please send updates to PubCrd@iodp.tamu.edu.

Wallace, L.M., Saffer, D.M., Petronotis, K.E., Barnes, P.M., Bell, R.E., Crundwell, M.P., Engelmann de Oliveira, C.H., Fagereng, A., Fulton, P.M., Greve, A., Harris, R.N., Hashimoto, Y., Hüpers, A., Ikari, M.J., Ito, Y., Kitajima, H., Kutterolf, S., Lee, H., Li, X., Luo, M., Malie, P.R., Meneghini, F., Morgan, J.K., Noda, A., Rabinowitz, H.S., Savage, H.M., Shepherd, C.L., Shreedharan, S., Solomon, E.A., Underwood, M.B., Wang, M., and Woodhouse, A.D., 2019. Site U1526. In Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, *Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program).
<https://doi.org/10.14379/iodp.proc.372B375.106.2019>

Supplementary material

Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, 2019. Supplementary material, <https://doi.org/10.14379/iodp.proc.372B375supp.2019>. *Supplement to Wallace, L.M., Saffer, D.M., Barnes, P.M., Pecher, I.A., Petronotis, K.E., LeVay, L.J., and the Expedition 372/375 Scientists, 2019. Hikurangi Subduction Margin Coring, Logging, and Observatories*. Proceedings of the International Ocean Discovery Program, 372B/375: College Station, TX (International Ocean Discovery Program).
<https://doi.org/10.14379/iodp.proc.372B375.2019>