

## BIOGRAPHICAL SKETCH - ROBERT B. DUNBAR

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W.M. Keck Professor of Earth Sciences, Stanford University  
Professor of Earth System Science, Stanford University  
Bass University Fellow in Undergraduate Education  
Director, Stanford University Stable Isotope Biogeochemistry Laboratory  
Senior Fellow, Woods Institute for the Environment, Stanford University

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<https://woods.stanford.edu/about/woods-faculty/robert-dunbar>

**EDUCATION:** Ph.D., 1981, Oceanography, University of California, San Diego  
B.S., 1975, Geology (Special Honors), University of Texas, Austin

**MEDALS & HONORS:** SCAR Medal for Excellence in Antarctic Research, 2016  
TED Speaker, 2010  
Richard Lyman Award, Stanford University, 2009  
Antarctic Service Medal of the United States, 1983

**PROFESSIONAL EXPERIENCE:** W.M. Keck Sr. Professor of Earth Sciences, Stanford University, 2008-present  
Professor of Earth System Science, Stanford University, 2007-present  
Associate Editor, Science Advances, AAAS, 2016-present  
Member, Advisory Board, Arctic Ice Project, 2020-present  
Member, Board on Atmospheric Science and Climate, U.S. National Academy of Sciences, 2017-2023  
Senior Fellow, Woods Institute for the Environment, Stanford University, 2004-Present  
Chair, Audit Committee, Consortium for Ocean Leadership, 2019-present  
Chair, International Advisory Board for Marine Science, Okinawa Institute of Science and Technology, 2018-2022  
Member, NAS/NRC Committee on Sustaining Ocean Observations to Understand Future Changes in Earth's Climate, 2016-2017  
Stanford University Member Representative, Consortium for Ocean Leadership, 2007-present  
Elected Trustee, Consortium for Ocean Leadership, 2017-2022  
Chair, International Science Panel, New Zealand Antarctic Research Institute (NZARI), 2017-present  
Bass University Fellow in Undergraduate Education, 2013-present  
Adjunct Professor, Victoria University of Wellington, New Zealand, 2010-present  
Member, Advisory Council, Inian Islands Institute, 2013-present  
Member, Management Committee, Center for Ocean Solutions, 2009-2016  
Elected Trustee, Consortium for Ocean Leadership, 2009-2016  
Chair, Board of Trustees, Consortium for Ocean Leadership, 2013-2016  
Member, NAS/NRC Strategic Visions for Antarctic Research Comm., 2014-2015  
Vice-Chair, Board of Trustees, Consortium for Ocean Leadership, 2011-2013  
Professor of Geological and Environmental Sciences, Stanford University, 1997-2007  
Senior Fellow, Institute for International Studies, Stanford University, 1998-2011  
Founding Director, Interdisciplinary Graduate Program in Environment and Resources (E-IPER), Stanford University, 2001-2005  
Director, Stanford Univ. Stable Isotope Biogeochemistry Laboratory, 1997-present  
J. Frederick and Elisabeth B. Weintz University Fellow in Undergraduate Education, 2004-2013

Victoria P. and Roger W. Sant Director of the Earth Systems Program, Stanford University, 2003-2012  
Governor, Joint Oceanographic Institutions, 2003-2007  
Associate Chair, Geological & Environmental Sciences, Stanford Univ., 2001-2004  
Adjunct Professor of Geology and Geophysics, Rice University, 1997-2004  
Professor of Geology and Geophysics, Rice University, 1994-1997  
Visiting Scientist, National Geophysical Data Center, 1994-1996  
Assistant/Associate Professor of Geology, Rice University, 1982-1994  
Master, Baker College, Rice University, 1989-1994  
Visiting Research Fellow, Research School of Earth Sciences, Victoria University of Wellington, New Zealand, 1988  
Visiting Scientist, Geology Department, Univ. New Mexico, Albuquerque, 1988  
Visiting Assistant Professor, Earth Sciences, Univ. of California, San Diego, 1981-82  
Lecturer in Earth Sciences, University of California, San Diego, 1979-80  
Graduate Research & Teaching Assistant, University of California, San Diego, Oceanography, Sedimentology, Marine Geology, Geochemistry, 1975-1981

**PRESENT RESEARCH INTERESTS:**

- 1) Climate dynamics – tropical and polar
- 2) Ocean chemistry/biogeochemistry
- 3) Coral reef ecology and biogeochemistry
- 4) Climate forcing of marine ecosystems
- 5) Policy issues related to the coastal oceans, climate change and anthropogenic effects
- 6) Antarctic glacial history

**OTHER PROFESSIONAL ACTIVITIES:**

- Member, National Center for Ecological Analysis & Synthesis/Center for Ocean Solutions Working Group, Design of the Palau National Marine Sanctuary, 2018-2020
- Provostial Lecturer, Universidad Nacional Autónoma de México, 2019
- Speaker, Bertarelli Symposium on BIOT Conservation, Diego Garcia, Indian Ocean, 2019
- Invited Speaker, Stanford Distinguished Careers Institute, February and April 2019
- Session Organizer, OceanVisions 2019, Atlanta, Georgia, 2019
- Faculty, Sitka Arts and Science Festival, Sitka Fine Arts Camp, July 2018
- Invited Speaker, SwissNex, Swiss Consulate, Nov 2018
- Provostial Lecturer, Okinawa Institute of Science and Technology, Sep 2018
- Invited Speaker, Stanford One Health Symposium, May 2018
- Invited Speaker, Wolfgang Berger Memorial Symposium, SIO/UCSD, April 2018
- Invited Speaker, Stanford Sierra Camp, May 2018
- Lead speaker, “Understanding Ice” Symposium and Exhibit, Rumsey Map Center, 2018
- Invited Workshop Leader, Partnership for Advanced Marine and Environmental Science Training for Pacific Islanders, Palau, August 2017
- Invited Speaker, Senators and Representatives Workshop on Ocean Health, Government of Palau, Koror, Palau, July 2017
- Faculty, NSF Footlocker Workshop – STEM Curriculum design for Faculty of the US-Affiliated Community Colleges of the Pacific, Palau, July-August 2017
- Invited Speaker, SCAR Open Sciences Conference, Kuala Lumpur, August 2016
- Faculty, Sitka Arts and Science Festival, Sitka Fine Arts Camp, July 2016
- Keynote speaker, Bluefin Futures Symposium, Monterey, CA, 2016
- Master Speaker, Net Positive Energy + Water Conference, CA, 2016
- Co-organizer and host, Pacific Leaders’ Summit, Honolulu, HI, June 2016
- Member, Program Committee, International Coral Reef Symposium, Honolulu, HI, 2016
- Stanford+Connects speaker, Stanford, CA, May 2016
- Session convener, Scientific Committee on Antarctic Research Open Sci. Conf., 2016
- Invited Speaker, Pre-collegiate Science Conference, Stanford, CA, 2015
- Invited Speaker, Future of the Venetian Lagoon, Comune di Venezia, Italy, 2015
- Eminent speaker, Frontiers in Marine Research Symposium, Univ. South Florida, 2015
- Invited speaker, Marine Geosciences Leadership Symposium, Washington, D.C., 2015
- Invited speaker, Antarctic Shelf Biogeochemistry, ASLO Biannual Meeting, Spain, 2015

- Member, NAS/NRC Committee on Developing a Strategic Vision for NSF Investments in Antarctic and Southern Ocean Research, 2014-2015
- Stanford+Connects speaker, San Diego, CA, November 2014
- Stanford+Connects speaker, Pasadena, CA, February 2014
- Workshop presenter, Footlocker event on Ocean Acidification training for US-affiliated Community Colleges of the Pacific, Palau, 2014
- Organizer (with Alan Cooper), Arts/Science intersection event, Scientific Committee on Antarctic Research Open Sciences Conference, Auckland, New Zealand, 2014
- Invited participant, Scientific Committee on Antarctic Research Horizon Scan, 2014
- Convener, GBMF Workshop on Coral Reef Management, Hawaii, February 2014
- Keynote speaker, Ecopoiesis Conference, California College of the Arts, 2012
- Invited speaker, ISOLAT Symposium, Cambridge, UK, September 2013
- Keynote speaker, UC Davis Graduate Ecology Symposium, 2012
- Chair, Final IAEA CRP workshop on “Isotopic studies of the ENSO System in the Ocean”, Monaco, 2012
- Keynote speaker, SCAR (Scientific Committee on Antarctic Research) Open Sciences Conference, Portland Oregon, 2012
- Keynote speaker, Late Cenozoic Environmental Changes in Antarctic Cryosphere: Perspectives from Sea, Land, and Ice Sheets, National Institute of Polar Research, Tokyo, Japan, 2012.
- Invited participant, US-Korean-Italian Workshop on Time Series Observation in the Ross Sea, Incheon, Korea, 2012
- Member, Coral Reefs and Climate Change Working Group, Center for Ocean Solutions, 2011-present
- Co-Leader, GSA/UT Austin Geologic Field Trip to Antarctica, 2012-2013
- Member, HOLOCLIP project team, European Union, 2011-present
- Re-elected to Board of Trustees, Consortium for Ocean Leadership, 2012-2015
- Member, Past Antarctic Ice Sheet Dynamics development team, SCAR, 2012-
- U.S. Member, Science Implementation and Planning Committee (SIPCOM), IODP, 2011-2013
- Invited speaker, SETI Institute, 2012
- Mentor, Jefferson High School Science Teacher, NASA Mentoring Program, 2011-2012
- Session Chair and Keynote speaker, International Symposium on Antarctic Earth Sciences, Edinburgh, 2011
- Invited Speaker, Northern Illinois University, University of Minnesota, Livermore Valley Association, Kennedy Middle School, 2011
- U.S. Member, Science Planning Committee (SPC), IODP (Ocean Drilling Program), 2011
- Chair, NSF-UNOLS Polar Research Vessel Committee, 2010-2012
- Mentor of Middle School Science Teacher, NASA Mentoring Program, 2010-2011
- Vice-Chair, Board of Trustees, Consortium for Ocean Leadership, 2011-present
- Chair, Public Policy Committee, Consortium for Ocean Leadership, 2011-present
- Invited Participant, US-Italian Workshop on Time Series Observation in the Ross Sea, Ischia, Italy, 2010
- Member, Working Group on Sea Level Rise and the Pacific Small Island and Developing States, Earth Justice and U.N. Foundation, 2010-present
- Chair, Ocean Drilling Subcommittee, Consortium for Ocean Leadership, 2010-present
- Invited speaker, TED Mission Blue to Galapagos, 2010
- Member, Visiting Review Committee, Ocean Sciences Program, Texas A&M University, Corpus Christi
- Invited Speaker, 2010, Victoria University of Wellington, New Zealand, Los Altos Earth Day Event, Bohemian Grove (museum talk and camp talk), Steve Schneider Symposium (Monterey), Cal Academy of Arts and Sciences, Ocean Leadership (DC)
- Member, New Ship Acquisition and Funding Models Committee, Consortium for Ocean Leadership, 2010-2011
- Member, Sample Allocation Committee, IODP Expedition 318, 2010 - present
- Member, Audit Committee, Consortium for Ocean Leadership, 2009-present

- Participant, McMurdo Ice Shelf Science Workshop, Wellington, New Zealand, 2009
- Site proponent and shipboard Site Leader, Integrated Ocean Drilling Program Expedition 318 to Antarctica, 2008-present
- Member, Committee of Visitors, Public evaluation of effectiveness of Office of Polar Research, US National Science Foundation, 2009-2010
- Member of Program Committee, Antarctic Climate Evolution Conference, Granada, Spain, 2009
- Member, Visiting Review Committee, Department of Marine Sciences, University of Otago, Dunedin, New Zealand, 2009
- Chair, IAEA ENSO Workshop, Lima, Peru, April 2009
- Elected Trustee, Consortium for Ocean Leadership, Washington D.C., 2009-present
- Richard Lyman Award Recipient, Stanford University, 2009
- Member, Visiting Review Committee, Oceanography Department, Texas A&M University, College Station, Texas
- Member, Management Committee, Center for Ocean Solutions, Stanford University, 2008-present
- Co-Chair, Antarctic Climate Evolution Leadership Workshop, Edinburgh, 2008
- Member, Program Committee, 2008 SCAR (Scientific Committee on Antarctic Research) Open Sciences Conference, Saint Petersburg, Russia
- Chair of Palmyra Atoll Research Consortium Finance Committee, 2008-2010
- Participant, Southern McMurdo Sound ANDRILL Project, 2007-2009
- Stanford Representative, Consortium for Ocean Leadership, 2007-present
- Vice-Chancellor's Research Fellowship Award, Australian National University, 2007
- Plenary Speaker, SCAR (Scientific Committee on Antarctic Research) Open Sciences Conference, Hobart, Australia, 2006
- Member, AGU Program Committee, 2006 Joint Meeting, Baltimore
- Stanford Representative to CORE, 2006-2007
- Member, Program Committee, 2006 SCAR (Scientific Committee on Antarctic Research) Open Sciences Conference, Hobart, Australia
- Participant, ANDRILL, McMurdo Ice Shelf Project, 2006
- Invited Participant, East Antarctic Margin Drilling Workshop, Spoleto, Italy, 2005
- Invited Speaker, Isotopes as climate tracers short course, IAEA, Trieste, 2004
- Invited Speaker, International Conference on Isotopes in Environmental Studies, IAEA, Monaco, 2004
- Elected Chair of Antarctic Research Vessel Oversight Committee, 2005-2008
- Elected Chair of Palmyra Atoll Research Consortium Science Committee, 2004-2005
- Elected Chair of Cooperative Research Project on El Nino Variability, International Atomic Energy Agency, 2004-2013
- Invited Participant, SCAR (Scientific Committee on Antarctic Research) meeting, Bremen, 2004
- Lecturer, Instituto de Verano, 2004, Universidad de Concepcion, Chile
- Governor, Joint Oceanographic Institutions, 2003-2007
- Member, U.S. Steering Committee for Antarctic Drilling, 2003-2012
- Inaugural S.T. Lee lecturer in Antarctic Environmental Studies, 2003
- Invited speaker at Holocene Climate Workshop, Eikom, Norway, 2003
- AGU Ocean Sciences Meeting Scheduling Committee, 2003-2004
- Member, Antarctic Research Vessel Oversight Committee, 2002-2005
- Member, Next Generation Polar Research Vessel Design Committee, 2003
- Member of Scientific Experts Group, IMAGES, 2002-
- Invited Participant, SPC-IODP transition meeting, Sapporo, 2003
- Co-convenor- IMAGES Southern Ocean Working Group conference, Barcelona, September 2002
- Alternate Governor, Joint Oceanographic Institutions, 2001-2003
- Invited Participant, Antarctic Climate Evolution Data/Model Integration Workshop, Amherst, MA, May 2002

- Invited Participant, National Science Foundation Earth System History RFP panel, Washington D.C., July 2002
- National Science Foundation Integrated Global C cycle review panel, 2002
- Distinguished Lecture Speaker, Ocean Drilling Program, 2001-2002
- Secretary, Paleoceanography and Paleoclimatology Focus Group, AGU, 2002-2004
- Invited participant, Conference on U.S. Participation (CUSP) in the Integrated Ocean Drilling Program, Washington D.C., 2002
- Provost's Lecture, SUNY Stony Brook, April 2002
- Invited Speaker, Climate Change in the Antarctic Peninsula Workshop, Hamilton, New York, 2002
- Invited Speaker, Antarctic Glacial Modeling workshop, Amherst, 2002
- Member, Steering Comm., ACE (Antarctic Climate Evolution), a new SCAR project
- Co-convenor- IMAGES Southern Ocean Working Group conference, Bremerhaven, June 2001
- Member, American Geophysical Union Committee on Paleoceanography and Paleoclimatology, 1994-2010
- Leader, Annual Records of Tropical Systems (IGBP/PAGES), 1999-2008
- Convener, first ARTS (Annual Records of Tropical Systems) Open Science Meeting, Noumea, New Caledonia, November 2001
- Invited Speaker, ANTOSTRAT symposium, Erice, Italy, September 2001
- Member, Steering Comm., ACE (Antarctic Climate Evolution), a new SCAR project
- Session Chair (2 sessions), Paleoclimatology: Observations and Modeling, American Geophysical Union, San Francisco, 2000
- Invited participant, International Workshop on "Submerged Coral Drilling", St. Petersburg, Florida, 2000
- Invited Speaker, SOJGOFS Symposium, Brest, France, July 2000.
- Invited participant, IMAGES SciCom meeting to discuss ARTS/IMAGES Interactions, Woods Hole, Massachusetts, 2000
- Member, US Science Advisory Committee for the Ocean Drilling Program, USSAC, and USSAC Executive Committee, 1996-1999
- Invited Participant, Gordon Research Conference on Polar Marine Science, Ventura, California, March 1999
- Session Chair (2 sessions), Annual to Interdecadal Records of Climate Variability: Past and Present, American Geophysical Union, San Francisco, 1999
- Leader, Research on Ocean/Atmosphere Variability and Ecosystem Response in the Ross Sea (ROAVERRS) Program, 1996-2002
- Invited Participant and Speaker, AESOPS Workshop, US Joint Global Ocean Flux Study, Keystone, Colorado, August 1999
- Invited Participant, PAGES-LOICZ Workshop on Sea Level and Climate, Honolulu, November 1999.
- Keynote Speaker, International Symposium on Paleoecology of Reefs and Carbonate Platforms: Miocene to Modern, International Association of Sedimentologists, Aix-en-Provence, 1999.
- Invited Speaker, Antarctic Radiocarbon Workshop, Woods Hole Oceanographic Institution, Woods Hole, MA, May 1999
- Co-leader, Annual Records of Tropical Systems (IGBP/PAGES), 1995-1998
- Session Chair, COMPLEX workshop on the future of Ocean Scientific Drilling, Vancouver, Canada, May 1999
- Invited Speaker, American Quaternary Association Annual Meeting, Puerto Vallarta, Mexico, September 1998
- Shore-based scientist and participant, Ocean Drilling Program Sampling Party, Leg 178, Bremen, Germany, 1998
- Invited participant, PAGES Open Sciences Meeting, London, 1998
- Invited participant and session organizer, History of El Niño, PAGES Pole-Equator-Pole Americas Transect Workshop, Merida, Venezuela, 1998
- Invited Participant, Sclerosponges as Paleoclimate indicators workshop, Miami, 1998

- Invited Speaker, Workshop on cross-validation of high-resolution climate proxies and instrument records, University of Washington, June 1997
- Invited Speaker, ATRIC Climate Variability Workshop, Melbourne, Australia, 1996
- Invited Speaker, ESH (Earth Systems History) Workshop, Portland, Oregon, 1996
- Participant, Ocean-CLIVAR planning workshop, Villefranche sur Mer, 1996
- Co-organizer, Annual Records of Tropical Systems Workshop, Hawaii, 1996
- Invited Speaker, Climate of the last 1000 years, International Union of Geodesy and Geophysics, 21st General Assembly, Boulder, Colorado, 1995
- Invited Speaker, Global Change and Climate Change in Pre-History Workshop, U.S. Forest Service, Houston, 1995
- Steering Committee, NOAA Paleoclimatology Program, 1994-1996, Chair 1995-1996
- Invited Speaker, Monitoring for Climate Change Detection in the Americas, IAI Workshop, Viña del Mar, Chile, 1995.
- Session Chair (4 sessions), Tropical Ocean-Atmosphere Interactions: Past and Present, American Geophysical Union, San Francisco, 1995
- Keynote Speaker, PEP-1 (Pole-Equator-Pole Transects) Workshop, La Paz, 1995.
- NSF Review Panel, Earth Systems History Program, 1995, 1996, 1997
- Member, PEP-1 (Pole-Equator-Pole transects) steering committee
- Planning Committee and Meeting Co-chair, Past Changes in Western North America Workshop, Albuquerque, January 1995
- Mentor and host of DOE Distinguished Global Change Postdoctoral Fellow (B.K. Linsley), 1992-1994
- Theme Sessions Co-chair, 11th Annual Pacific Climate Meeting, 1994
- Invited Speaker, "CLIVAR-PAGES Workshop", Venice, November 1994
- Invited Participant - "Reconstructing global climate change over the past two millennia from anaerobic sediments of the eastern Pacific Ocean", San Francisco, April 1994
- Invited Participant - NATO Advanced Research Institute on "Climatic fluctuations and forcing factors during the last 2000 years", Tuscany, Italy, October 1994
- NOAA Review Panel, National Undersea Research Program, 1993
- Invited Participant - Workshop on "Biogeochemistry of Ross Sea Sediments", Istituto Geologia Marina, Bologna, Italy, 1993
- Invited Participant - "Pole-Equator-Pole Paleoclimate Workshop", Panama, September 1993
- NOAA Review Panel, Paleoclimate Program, 1992
- Organized "Climate Reconstruction from Corals Workshop", Puerto Rico, 1992
- Keynote Speaker, 5th International Congress on Pacific Neogene Stratigraphy, Shizuoka, Japan, 1991
- Invited Participant to Workshop on a U.S. JGOFS (Joint Global Ocean Flux Study) program in the Southern Ocean, National Science Foundation, October 1990
- Editorial Review Board, Proceedings of the Ocean Drilling Program, Leg 115, Scientific Results, 1989-1990
- Organized and led IGCP 156 Field Workshop, Peru, May 1988 (with P. Baker)
- NSF Review Panel, Marine Geology and Geophysics, 1986-1989
- NSF Review Panel, USSSP, Ocean Drilling Program, 1987
- The American Geophysical Union, 1980 - present
- The Society of Economic Paleontologists and Mineralogists (Honorary Membership and Achievement Award, 1980), 1980-1993
- International Association of Sedimentologists, 1981-1992
- Peruvian Geological Society, 1984 - 1990
- Organized and led IGCP 156 Field Workshop, Peru, May 1988 (with P. Baker)
- International Geological Correlation Project 156 - Phosphorites, 1984-1991
- IGCP Project 246 - Pacific Neogene Events, 1986-1992
- Antarctic Service Medal, 1984
- Outstanding paper, GSA Annual Meeting, 1980, Marine Geology session

- Invited participant, NATO Workshop on "Coastal Upwelling: Its Sediment Record", Portugal, 1981
- Phi Beta Kappa
- Phi Kappa Phi
- Phi Eta Sigma

**EXPEDITIONS:**

- Numerous cruises 1974-75, R/V *Longhorn*, Gulf of Mexico
- Pleiades, leg 3, 1976, R/V *Melville*, Eastern Equatorial Pacific
- IndoMed, legs 2 and 12, 1977, 1978, R/V *Melville*, North and South Atlantic
- Chief Scientist: - SABA 79, 1979, R/V *New Horizon*, Santa Barbara Basin
- Chief Scientist: - Sediment Trap Intercalibration Experiment, 1979 R/V *Gillis*, Panama Basin
- Chief Scientist: - NOFC 80, 1980, R/V *Melville*, California Borderlands
- Deep Freeze 83, 1983, USCGS *Glacier*, Ross Sea, Antarctica
- Antarktis II/3, 1984, F/S *Polarstern*, Antarctic Peninsula and Weddell Sea
- Panama Reef Drilling Program, 1984, R/V *Benjamin*, Gulf of Panama
- Geologic mapping, Coastal Peru and Ecuador, 1984, 1985, 1986, 1987, 1988, 1990
- Land and sea ice based Geology and Oceanography in McMurdo Sound, Antarctica as a member of USARP, 1984, 1986, 1987, 1988, 1989, 1990, 1991
- ODP Leg 128, Sea of Japan, R/V *Resolution*, Aug-Oct, 1989
- Chief Scientist: - Ross Sea Flux Experiment, USCGC *Polar Sea*, Jan-Feb, 1992
- Submerged coral drilling, Galapagos Islands, Jan, 1993
- Chief Scientist: - Ross Sea Flux Experiment, USCGC *Polar Sea*, Jan-Feb, 1994
- Submerged coral drilling, Kenya, Mar, 1995, August/September, 1996
- Chief Scientist: - ROAVERRS (Research on Ocean-Atmosphere Variability and Ecosystem Response in the Ross Sea) R/V *Nathaniel B. Palmer* December/January 1996/97
- Lake coring and water column process cruise, Lake Titicaca, RV *Neecho*, May/June 1996
- Chief Scientist: - Submersible Diving, Hawaii, RV *Kaimikai O Kanaloa*, DSRV *Pisces V*, August 1997
- Chief Scientist: - Fanning Island Coral Drilling, RV *Machias*, October, 1997
- Chief Scientist: - ROAVERRS (Research on Ocean-Atmosphere Variability and Ecosystem Response in the Ross Sea) R/V *Nathaniel B. Palmer* December/January, 1997/98
- Coral Drilling in Galapagos, RV *Samba*, June, 1998
- Chief Scientist: - ROAVERRS (Research on Ocean-Atmosphere Variability and Ecosystem Response in the Ross Sea) R/V *Nathaniel B. Palmer* October-December, 1998
- Marine Geology and Geophysics, Palmer Deep and Antarctic Peninsula, R/V *Nathaniel B. Palmer* March-April, 1999
- Chief Scientist: - Marine Geology and Geophysics, Palmer Deep and Antarctic Peninsula, R/V *Lawrence Gould*, April-May, 2000
- Marine Geology and Geophysics, Biogeochemistry, East Antarctic Margin, R/V *Nathaniel B. Palmer*, January-April, 2001
- Coral reef instrumentation and C system monitoring, January, 2002
- Leader, Stanford Alumni Travel Study, Canadian Rockies, July, 2002
- Chief Scientist: - Marine Geology and Geophysics, Palmer Deep and Antarctic Peninsula, R/V *Lawrence Gould*, March, 2002
- Submersible Diving Gulf of Alaska, RV *Atlantis*, DSRV *Alvin*, June-July, 2002
- Leader, Stanford Alumni Travel Study, Falkland's, South Georgia, Antarctica, January, 2003
- Lake coring in Tierra del Fuego, January, 2003
- Stanford@SEA, *Robert Seamans*, Hawaii-Palmyra-Kingman, May-June, 2003
- Sediment trap recovery cruise, Lake Titicaca, July, 2003
- Lake Coring, Patagonia, AWS installation, Tierra del Fuego, Jan-Feb 2004
- Chief Scientist: - Submersible Diving, Hawaii, RV *Kaimikai O Kanaloa*, DSRV *Pisces V*, October, 2004
- Beagle Canal, Tierra del Fuego, refitting and launch of Stanford research vessel, 2005
- Easter Island coral drilling for paleoclimatology, March, 2005
- Leader, Stanford Alumni Travel Study, Falklands, South Georgia, Antarctica, January, 2005

- Co-Chief Scientist: - Stanford@SEA, *RC Seamans*, Honolulu to Line Islands and return, May/June, 2005  
 - Leader, Stanford Alumni Travel Study Expedition to Sea of Okhotsk, 2005  
 - Coral drilling expedition, Palmyra Atoll, June, 2005
- Chief Scientist: - Submersible Diving, Samoa and Line Islands, RV *Kaimikai O Kanaloa*, DSRV's *Pisces IV and V*, July-August, 2005  
 - Marine Biology, Biogeochemistry, and Ocean Physics, Ross Sea, Antarctica, R/V *Nathaniel B. Palmer*, December-February, 2005-2006 (CORSACS)  
 - Coral dissolution control volume experiment, Heron Island, Australia, February, 2006
- Chief Scientist: - Lake coring expedition, RV *Neecho*, Lago Fagnano, Patagonia, March, 2006  
 - Leader, Stanford Alumni Association Travel Study Expedition to New Guinea, 2006  
 - Leader, Stanford Alumni Association Travel Study Expedition, Canadian Rockies, 2006  
 - Marine Biology, Biogeochemistry, and Ocean Physics, Ross Sea, Antarctica, R/V *Nathaniel B. Palmer*, October-December, 2006 (CORSACS)  
 - Leader, Stanford Alumni Travel Study, Falklands, South Georgia, Antarctica, January, 2007
- Co-Chief Scientist: - Stanford@SEA, *RC Seamans*, Honolulu to Line Islands and return, May/June, 2007  
 - Coral drilling expedition, Palmyra Atoll, June, 2007  
 - Leader, Stanford Alumni Travel Study, Kilimanjaro Expedition, August, 2007
- Chief Scientist: - Submersible Diving, Northwest Hawaiian Islands National Monument, RV *Kaimikai O Kanaloa*, DSRV *Pisces V*, October-November, 2007  
 - Leader, Stanford Alumni Travel Study, New Zealand, January, 2008  
 - Leader, Limnology studies in Patagonia, September, 2008
- Chief Scientist: - Ocean acidification studies, Great Barrier Reef, RV *Capricorn Star*, November, 2008
- Chief Scientist: - Coral drilling for paleoclimatology, Palau, RV *Reel Time*, Nov-Dec, 2008  
 - Leader, Stanford Alumni Travel Study, Falklands, South Georgia, Antarctica, January, 2009
- Co-Chief Scientist: - Stanford@SEA, *RC Seamans*, Papeete, Marquesas, Honolulu, May-June, 2009  
 - Leader, Stanford Alumni Travel Study, Bering Sea, Russia, Alaska, July-August, 2009  
 - Shipboard Scientist, *Joides Resolution*, Integrated Ocean Drilling Program expedition to Wilkes Land, Antarctica, Jan-Mar, 2010  
 - TED Mission Blue Expedition to the Galapagos Islands, April, 2010  
 - Leader, Limnology studies in Patagonia, September, 2010  
 - Leader, Stanford Alumni Travel Study, Falklands, South Georgia, Antarctica, Jan-Feb, 2011
- Co-Chief Scientist: - Stanford@SEA, *RC Seamans*, Honolulu to Line Islands and return, May/June, 2011  
 - Leader, Moore Foundation Science Scoping Trip to Palmyra Atoll, March/April, 2011  
 - Leader, Palmyra Atoll ocean acidification field program, May, 2011  
 - Leader, Limnology studies in Patagonia, August, 2011  
 - Leader, Palmyra Atoll ocean acidification field program, Sept/Oct, 2011  
 - Leader, C system chemistry field experiments, Ofu, American Samoa, Nov 2011  
 - Leader, submerged coral paleoclimate drilling program, T'au, Nov/Dec 2011  
 - Leader, Lake Coring and Seismic Program, RV *Neecho*, Chile, Jul-Aug 2012  
 - Leader, C system chemistry field experiments, Palmyra Atoll, Sep-Oct 2012  
 - Leader, Stanford Alumni Travel Study, Maldives, Lakshadweep Islands, India, Dec., 2012  
 - Lecturer and Leader, UTIG/GSA 125<sup>th</sup> Anniversary Geoscience field trip to Antarctica, Dec/Jan, 2012-2013  
 - Shipboard Scientist, *Nathaniel B. Palmer*, expedition to Ross Sea and Thwaites Coast, Antarctica, Feb-April, 2013  
 - Leader, Stanford Alumni Travel Study, Galapagos Islands, July, 2013  
 - Leader, Lake Coring and Seismic Program, RV *Neecho*, Chile, March-April 2014



- Leader, C system chemistry field experiments, Palmyra Atoll, July-August, 2014
- Leader, Stanford Alumni Travel Study, Seychelles/Tanzania, November-December, 2014
- Leader, Stanford Alumni Travel Study, Falklands, South Georgia, Antarctica, January- February, 2015
- Co-Chief Scientist: - Stanford@SEA, *RC Seamans*, Tahiti to Kiribati to Hawaii, May/June, 2015
- Leader, Palau C cycle sampling program, July, 2015
- Leader, Stanford Alumni Trip, Mount Everest Base Camp Trek, October, 2015
- Co-leader, Oceanography and Coral Reef Ecology of the Chagos Archipelago, *Vava II*, April, 2016
- Co-leader, Coral Paleoclimatology Expedition to Mauritius, June-July, 2016
- Leader, Stanford Alumni Travel Study, Iceland and Greenland, July-August, 2016
- Leader, Fjord oceanography, *RV Neecho*, September 2016
- Leader, Stanford Alumni Travel Study, Antarctica, January, 2017
- Co-Chief Scientist: - Stanford@SEA, *RC Seamans*, Tahiti to Tonga, May/June, 2017
- Leader, Stanford Alumni Travel Study, Nunavut, Canada, July 2017
- Leader, Stanford Alumni Travel Study, Tahiti to Easter Island, Nov 2017
- Leader, C system Group, NBP 1801, Punta Arenas, Chile to Hobart, Australia, December 2017 – March 2018
- C group team leader, *Grampian Frontier* research cruise to the Chagos Archipelago, February/March 2018
- Leader, Fjord oceanography, *RV Neecho*, September 2018
- Leader, Stanford Alumni Travel Study, Seychelles, Madagascar, Mauritius, 2018
- C group team leader, *Grampian Frontier/Vava II* research cruise to the Chagos, 2019

**FULL LIST OF PUBLICATIONS: (h-index = 78, i10-index = 207 as of October 2020) - Google Scholar:**  
<https://scholar.google.com/>

- Dunbar, R.B., 1975, Variation in grain size modes in the proximal offshore of Padre Island, Texas, Senior Thesis, University of Texas at Austin, 40 p.
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- Johnson, K., McKay, R., Bertler, N., Jiménez-Espejo, F., Albot, A., Riesselman, C., Horgan, H., Crosta, X., Dunbar, R., and Escutia, C., 2019, Holocene ice-ocean interactions in the Ross Sea and Adélie Land Regions, 13th International Conference on Paleoceanography in Sydney, Australia.
- Hennig, A.N., and R.B. Dunbar, 2019,  $\delta^{18}\text{O}$  time series evidence of ocean-driven basal melt in Pine Island Bay, Antarctica, American Geophysical Union Annual Autumn Meeting 2019, San Francisco, CA, C21D-1486.
- Pekar, S., and R.B. Dunbar Ultra-High Resolution Foraminiferal Biofacies and Stable Isotope ( $\delta^{13}\text{C}$  and  $\delta^{18}\text{O}$ ) Records of Mid to Late Holocene Oceanographic Change in the Adélie Basin, American Geophysical Union Annual Autumn Meeting 2019, San Francisco, CA, PP53C-1461.
- Giordano, P., Giglio, F., Mariangela, R., Capello, M., Cutroneo, L., Dunbar, R.B., Mucciarone, D.A., Smith, W.O., Manno, C., and L. Langone, 2020, Long time-series of export fluxes in the western Ross Sea (Antarctica), 22nd EGU General Assembly, Bibcode: 2020EGUGA..2222442G
- Hennig A.N., D.A. Mucciarone, and R.B. Dunbar, 2020, Ocean-driven glacial melt estimation time series using salinity and oxygen isotopes in Pine Island Bay, West Antarctica, American Geophysical Union Ocean Sciences Meeting 2020, San Diego, CA.
- Hirsh, H., K.J. Nickols, Y. Takeshita, S. Traiger, D.A. Mucciarone, S.G. Monismith, and R.B. Dunbar, 2020, Drivers of biogeochemical variability in a California kelp forest and implications for local amelioration against ocean acidification, American Geophysical Union Ocean Sciences Meeting 2020, San Diego, CA.
- Bochdansky, A., R.B. Dunbar, D.A. Hansell, and G.J. Herndl, 2020, What can we learn about carbon export from optically determined mesopelagic particle abundance? American Geophysical Union Ocean Sciences Meeting 2020, San Diego, CA
- Traiger, S., H. Hirsh, B. Cohn, D. Panos, Y. Takeshita, D. Mucciarone, Dunbar, R.B., and K.J. Nickols, 2020, Biological Contributions to Biogeochemical Variability of Kelp Forest Habitats, American Geophysical Union Ocean Sciences Meeting 2020, San Diego, CA

**COMPETITIVE RESEARCH GRANTS AWARDED TO R.B. DUNBAR (SINCE 1994):**

- 1) National Science Foundation, Division of Polar Programs, DPP-8818136, "Sinking and suspended particulate matter on the Antarctic Continental margin", \$424,500, 1 Jul 89 - 30 Jun 94.
- 2) National Oceanic and Atmospheric Administration, Office of Global Programs, DOC #NA90AA-D-AC827 (w/ G. Wellington), "Long-term climate records from Eastern Pacific corals", \$191,574, 1 Oct 1990 - 30 Sep 1994.
- 3) National Science Foundation, Atmospheric Sciences, Climate Dynamics, ATM-9116780 (w/ B. Linsley), "High frequency ocean-climate variability and Younger Dryas-style events in the Sulu Sea during the last 750,000 years", \$61,848, 1 Mar 92 - 28 Feb 95.
- 4) National Oceanic and Atmospheric Administration, Office of Global Programs, DOC #NA26GP046901 (w/ J. Cole), Workshop on coral-based climate reconstruction, \$28,000, 1 Sep 92 - 31 Aug 94.
- 5) Department of Energy, Distinguished Global Environmental Change Post-Doctoral Research Program, Rice University designated as host institution and R.B. Dunbar designated as DOE Mentor of Post-Doctoral Fellow B. Linsley, \$72,000, 1 Sep 92 - 31 Aug 94.
- 6) National Science Foundation, Office of Polar Programs, OPP-9221578, "Biogeochemistry of carbon and silicon on the Antarctic Shelf: Particle flux and taxonomic studies", \$60,763, 1 Jul 93 - 30 Jun 94.
- 7) Department of Energy, National Institute for Global Environmental Change (w/ B. Linsley), "High resolution Reconstruction of Eastern Pacific Climate during the Past 1000 Years using corals", \$22,178, 1 Dec 93 - 30 Nov 94.
- 8) National Science Foundation, Atmospheric Sciences, Climate Dynamics, ATM-94 (w/ B. Linsley), "Collection of multi-century coral records of ocean-atmosphere variability from Clipperton Atoll", \$39,123, 1 Mar 94 - 1 Sep 95.
- 9) National Science Foundation, Atmospheric Sciences, Climate Dynamics, ATM-9409779, "Recent climate variability in the western Indian Ocean and East Africa: exploring the potential of isotopic records in Kenyan corals", \$25,909, 1 April 94 - 31 Mar 96.
- 10) Department of Energy, National Institute for Global Environmental Change (w/ B. Linsley), "Documenting changes in eastern Pacific Climate using corals: Baseline data for validation of climate models", \$349,942, 1 Dec 94 - 30 Nov 97.
- 11) National Oceanic and Atmospheric Administration, Office of Global Programs, DOC #GC95-162 (w/ G. Wellington), "Climate records from Eastern Pacific Corals", \$156,393, 1 Apr 95 - 31 Aug 97.
- 12) National Science Foundation, Atmospheric Sciences, Climate Dynamics (w/ P. Baker, G. Seltzer, and S. Fritz) "SGER: Paleoclimatic Research in Lake Titicaca", \$15,080, 1 Jul 94 - 30 Jun 95.
- 13) National Science Foundation, Office of Polar Programs, OPP-9419605, "Research on Ocean-Atmosphere Variability and Ecosystem Response in the Ross Sea (ROAVERRS)", \$333,083, 15 Aug 95 - 31 Aug 01. R.B. Dunbar lead P.I. on group proposal funded at ~\$2,200,000.
- 14) National Science Foundation, Atmospheric Sciences, Climate Dynamics, ATM-9528411, (w/ J. Cole), "Support for a Workshop on Annual Records of Tropical Systems", \$49,718, 1 Nov 95 - 31 Oct 96.
- 15) National Science Foundation, Atmospheric Sciences, Climate Dynamics, ATM-9624715, (w/ P. Baker, G. Seltzer, and S. Fritz), "Lake Titicaca: Toward a detailed Record of late Quaternary climate in subtropical South America", \$105,414, 1 Jan 96 - 31 Dec 96.
- 16) National Oceanic and Atmospheric Administration, Office of Global Programs (w/ B. Linsley), "Annual to Seasonal Climate Records from Line Island Corals", \$34,763, 1 Jan 97 - 31 Dec 99.
- 17) National Science Foundation, Atmospheric Sciences, Climate Dynamics/ESH, OCE-9632287 (w/ J. Cole), "Deciphering the oceans influence on East African climate using multicentury, multivariate coral records", \$279,375, 1 June 98 - 31 May 00.
- 18) National Science Foundation, Office of Polar Programs, OPP-9615668, "Holocene Paleoenvironmental Change along the Antarctic Peninsula: A Test of the Bi-Polar/Solar Signal", \$75,180, 1 Jul 97 - 30 Jun 01.
- 19) National Science Foundation, Atmospheric Sciences, Climate Dynamics, "Quaternary Paleoclimate Record from Tropical South America: Lake Titicaca", \$187,759, 1 Jan 97 - 31 Dec 01. (Total Group budget: \$632,431)

- 20) National Undersea Research Program, National Oceanic and Atmospheric Administration, “Annual-to-Centennial Climate Variability from Hawaiian Deep Water Sclerosponges and Corals”, submersible dive, ship-time, and travel support direct from NURP, 1 Feb 97 - 31 Jan 98.
- 21) National Oceanic and Atmospheric Administration, Office of Global Programs NA86GPO117-1, with NSF-Earth Systems History, “Paleoclimate records from Eastern Pacific Corals”, \$43,001, 1 Apr 98 - 31 Mar 00.
- 22) David and Lucille Packard Foundation, “Acquisition of a stable isotope mass spectrometer facility in support of ocean margins research”, \$240,000, 1 Oct 97 – 31 April 99.
- 23) National Science Foundation, Office of Polar Programs, NSF OPP-9909837, "Quaternary Glacial History and Paleoenvironments of the East Antarctic Margin", \$147,172, 1 Jul 00 - 31 Dec 03.
- 24) Bechtel Foundation, "Aligning Economic Growth, Resource Use, and Environmental Objectives in the Yaqui Basin, \$300,000, 1 Sep 99 - 30 Aug 03. (with P Matson et al.)
- 25) Bio-X Initiative, “Coral Reef Health and Interaction with the Global C Cycle: Innovative Technologies for Assessment”, \$175,000, 1 Dec 00 – 30 Nov 02. (w. J. Koseff)
- 26) Lawrence Livermore National Laboratory, “Late Quaternary shifts in tropical hydrology inferred from lacustrine facies on the South American Altiplano”, \$19,784, 1 Oct 00 – 30 Sep 01 (w. H. Rowe).
- 27) A.W. Mellon Foundation, "Ecological Problems at Intermediate Scales of Space and Time: An integrated training program", \$852,375, 1 Jan 01- 31 Dec 04 (with P.I.'s H. Mooney, C. Fields, et. al.)
- 28) National Science Foundation, Office of Polar Programs, NSF OPP-0207305, "Quaternary Glacial History and Paleoenvironments of the East Antarctic Margin: Supplement", \$39,962, 14 Jan 02 - 31 Dec 03.
- 29) National Oceanic and Atmospheric Administration, Office of Ocean Exploration, “Climate variability in the deep sea from corals on seamounts in the Gulf of Alaska”, 31 May 02 – 1 Jan 04.
- 30) National Oceanic and Atmospheric Administration, National Undersea Research Program, “Hawaii Undersea Research Lab, “Decadal-to-centennial climate variability revealed by deep sea corals from the central North Pacific gyre”, 1 June 04 – 31 May 07.
- 31) National Science Foundation, ODP-USSAC, “Stable isotope ( $\delta^{13}\text{C}$ ,  $\delta^{18}\text{O}$ ) stratigraphy of the Eocene/Oligocene boundary: ODP Site 1263, Leg 208, \$29,000, 1 Nov 03 – 31 Oct 04.
- 32) UPS Foundation, “Urban water security in the developing mega-cities of South America”, \$44,000, 1 Feb 04 – 31 Jan 05.
- 33) National Science Foundation, Office of Polar Programs, NSF OPP-0338350, “Collaborative Research: Interactive Effects of Iron, Light and Carbon Dioxide on Phytoplankton Community Dynamics in the Ross Sea”, \$369,374, 1 June 04 – 31 May 07.
- 34) National Science Foundation, Atmospheric Sciences, Climate Dynamics, NSF ATM-0408668, “SGER: Holocene Variability of the South Pacific Westerly Wind Field”, \$59,581, 15 Feb 04 – 14 Feb 05.
- 35) National Science Foundation, Ocean Sciences, Climate Dynamics/ESH, NSF ATM-0402562, “Collaborative research: Interannual-to-centennial climate variability in the southeastern Pacific from Easter Island corals”, \$295,091, 1 June 04 – 31 May 07.
- 36) Environmental Interdisciplinary Initiatives Program, Stanford's Institute for the Environment, “Biomineralization and Past Climate Change: The Ion Micro-probe Revolution”, \$120,000, 1 June 04 – 31 May 06, with A. Meibom (P.I.).
- 37) National Oceanic and Atmospheric Administration, Office of Global Programs, “North Pacific Decadal to Centennial Variability from Deep Sea corals: a New Archive for Climate Change Detection”, \$355,000, 2/1/05-1/31/09.
- 38) National Science Foundation, Marine Geology and Geophysics, NSF OCE-0551792, “Collaborative Research: Pacific Ocean Gyre Exchange and Ventilation Processes: Proxy Development using Deep Sea Corals”, \$305,931, 3/1/06 – 2/28/09.
- 39) National Science Foundation, Office of Polar Programs, Polar Earth Sciences, NSF ANT-0639409, "Collaborative Research: The 10th International Symposium on Antarctic Earth Science (ISAES X)", \$111,708, 3/1/07 – 2/28/09 (Alan Cooper, lead P.I.).

- 40) National Science Foundation, Ocean Sciences, Chemical Oceanography, NSF OCE-0729236, “Coral Reef Primary Production and Calcification: Quantitative Analysis of Sensitivity to Environmental Forcing using a Control Volume Approach”, \$511,231, 11/1/07-10/31/10.
- 41) ANDRILL, National Science Foundation via University of Nebraska, “Mid-Pliocene through Holocene Paleooceanographic Studies”, \$26,535, 9/1/07-8/31/08.
- 42) ANDRILL, National Science Foundation via University of Nebraska, “Plio-Pleistocene evolution of sea-ice and nitrate utilization in the Ross Sea, Antarctica”, \$29,728, 9/1/07-8/31/08.
- 43) Environmental Ventures Program, Woods Institute for the Environment, “Understanding the effects of fishing on Coral Reef Ecosystems: An interdisciplinary approach”, \$163,492, 9/1/08 – 8/31/10.
- 44) National Science Foundation, Office of Polar Programs, NSF OPP-0938553, “Participant Support for the First Antarctic Climate Evolution Symposium”, \$50,000, 6/1/09 – 5/31/10.
- 45) National Science Foundation, Ocean Sciences, Chemical Oceanography, NSF OCE-0941199, “Coral Reef Primary Production and Calcification: Quantitative Analysis of Sensitivity to Environmental Forcing using a Control Volume Approach: Supplement”, \$63,235, 9/1/09 – 10/31/10.
- 46) Australian Research Council, Discovery Projects Program, “Ocean Acidification in a Rapidly Increasing CO<sub>2</sub> World”, \$855,000 (AUS), 1/1/09 – 12/31/11. (Malcolm McCulloch, ANU, Project lead)
- 47) National Oceanic and Atmospheric Administration, Office of Ocean Exploration, “Interdisciplinary Deep Exploration of the Line Islands: Deep Sea Coral Communities, Biodiversity, and Climate Change”, \$468,300, 1/1/12 – 12/31/14 (recommended for funding but award is now pending availability of suitable vessel and ROV or submersible).
- 48) Environmental Ventures Program, Woods Institute for the Environment, “Understanding the Carbon Cycle in Terrestrial and Marine Ecosystems with Field-Based Measurements Using a Revolutionary Isotopic Technique (CRDS)”, \$196,266, 9/1/10 – 8/31/12.
- 49) Consortium for Ocean Leadership, National Science Foundation, “Participation in IODP Expedition 318 to Wilkes Land, Antarctica”, \$95,376, 1/4/10 – 1/3/11.
- 50) Consortium for Ocean Leadership, National Science Foundation, “Initial Characterization of Site U1357 Cores: Towards development of an annually-resolved record of climate and glacial variability in East Antarctica”, \$14,999, 7/1/10 – 6/30/11.
- 51) National Oceanic and Atmospheric Administration, National Undersea Research Program, “Hawaii Undersea Research Lab, “Central Tropical Pacific Deep-Sea Coral Communities: Climate and Chemical Change in the Ocean Interior across the Equator”, (recommended for funding but award is now pending availability of suitable vessel and ROV or submersible).
- 52) The Gordon and Betty Moore Foundation, “Observations and modeling of the C system dynamics at Palmyra Atoll: In support of the development of management strategies for ocean acidification impacts in the tropics”, \$832,692, 12/1/10 – 8/31/14.
- 53) National Science Foundation, ATM - GEO/ATM - Paleoclimate Program, NSF EAR-1103550, “Holocene Climate Change in Southwestern Patagonia: New Insights from Large Lake Paleolimnology”, \$592,251, 2/1/11 – 1/31/14.
- 54) Environmental Ventures Program, Woods Institute for the Environment, “How marine species affect ocean acidification: the other side of the coin”, \$198,760, 10/01/11 – 09/30/13.
- 55) National Science Foundation, Marine Geology and Geophysics, IODP, NSF OCE-1129101, “Collaborative Research: An Ultra-High Resolution Holocene Climate Record from a Varved Sediment Sequence from the Adelie Coast, Antarctica (IODP Exp 318)”, \$234,828, 6/1/11 – 5/31/14.
- 56) National Science Foundation, Office of Polar Programs, NSF OPP-1142044, “Collaborative Research: TRacing the fate of Algal Carbon Export in the Ross Sea (TRACERS)”, \$567,033, 3/1/12 – 7/31/16.
- 57) National Science Foundation, Division of Ocean Sciences, OCE-1203999, “Collaborative Research: Developing a Continuous Reconstruction of Tropical Pacific Climate over the Last 500-700 Years: Analysis of Massive *Porites* Corals from American Samoa”, \$273,506, 6/1/12 – 5/31/14.
- 58) The Gordon and Betty Moore Foundation, “Understanding Coral Reef Resilience to Advance Science and Conservation”, \$253,000, 11/6/12 – 12/31/15.
- 59) The Center for Innovation in Global Health, Stanford University, “Integrating climatic, genomic and archeo-historic data: a proof-of-concept study to improve malaria ‘early warning’ predictive model”, Seed Grant awarded to K. Seetah, \$50,000.



- 60) Bertarelli Program in Marine Sciences, “Understanding the conservation value of managing coral reef biodiversity for the wider BIOT marine ecosystem”, \$825,109, 1 Jan 17 – 31 Dec 21.
- 61) National Science Foundation, “Measurement of Antarctic Ice Loss using Stable Isotopic Measurements in Seawater”, NSF-PLR 1644118, \$649,000, 1 Aug 17 – 31 Jul 21.
- 62) National Science Foundation, “Collaborative Research: Cobalamin and Iron Co-Limitation of Phytoplankton Species (CICLOPS) in Terra Nova Bay”, NSF-PLR 1643845, \$364,425, 1 Sep 17 – 31 Aug 21.
- 63) National Science Foundation, “Collaborative Research: RUI: Building a mechanistic understanding of water column chemistry alteration by kelp forests: emerging contributions of foundation species”, NSF-OCE 1737096, \$203,157, 1 Sep 2017 – 31 Aug 2021.
- 64) National Science Foundation, “Wavy turbulent flow over a coral reef: vertical structure and fluxes”, (S. Monismith, lead PI) NSF-OCE 1948189, \$725,813. 1 Jan 2020 – 31 Dec 2022.
- 65) MAC3 Foundation, “Development of a Cavity-Ringdown-Spectroscopy Modification for use in Autonomous Underwater Vehicles to measure ice sheet meltwater”, \$100,000, 1 June 20 – 31 May 2021.
- 66) Stanford Office of International Affairs, “Enabling Science to Policy and Management of a new Large Marine Protected Area in Palau”, \$14,750, 1 May 20 – 30 Apr 21.
- 67) Stanford Woods Institute for the Environment, “Harnessing large-scale marine protection for food security, cultural heritage and biodiversity conservation”, (F. Micheli, lead PI), \$193,071, 1 Sep 20 – 31 Aug 22.
- 68) MAC3 Foundation, “Inexpensive physical data for marine conservation and ecosystem management in Palau and other Large Marine Protected Areas”, (S. Monismith, lead PI), \$84,000, 1 Dec 20 – 30 Nov 21.
- 69) MAC3 Foundation, “Are whales global climate engineers? Using new tagging and remote sensing technologies to understand how the largest animals from the Antarctic can impact the global carbon cycle”, (J. Goldbogen, lead PI), \$100,000, 1 Dec 20 – 30 Nov 21.
- 70) Stanford Sustainability Initiative, “One Ocean: A vision for transformative ocean research, education, and impact at Stanford University”, \$30,000, 17 Sep 20 – 31 Aug 21.
- 71) CENCOOS – State of California (The Central and Northern California Ocean Observing System), “Real-time monitoring of kelp forest physical environments”, (S. Monismith, lead PI), \$811,043, 1 Jun 21 – 31 May 25 Pending).
- 72) Bertarelli Program in Marine Sciences, “Linking Reef Biodiversity, Connectivity, & Physical Drivers to Enhance Regional Management”, \$734,011, 1 Feb 21 – 31 Jan 25.

## UNIVERSITY SERVICE AT RICE UNIVERSITY AND STANFORD UNIVERSITY:

### *Post-doctoral Fellows Supervised*

1990-1994	Braddock Linsley, Ph.D., University New Mexico, now Professor, Columbia University
1993-1994	Linda Bonnell, Ph.D. Indiana, now at Rogalan Research, Stavanger, Norway
2002-2004	Kelly Kryc, Ph.D., Boston University, now GSA Congressional Science Fellow, Washington DC
2003-2005	Dominik Fleitmann, Ph.D., Universitat Bern, now Professor, University of Basel, Switzerland
2005-2008	Brendan Roark, Ph.D. University of California, Berkeley, now Professor, Texas A&M University
2005-2007	Eduard Costa, Ph.D., University of Barcelona, now teaching in Spain
2005-2008	Fanny Houlbreque, Ph.D., Université Paris VI, now Program Officer, IAEA, Monaco
2009-2012	Alexis Vizcaino i Martí, Ph.D., University of Barcelona
2012-2013	Kenny Schneider, Ph.D., Hebrew University
2017-2018	Hans DeJong, Ph.D., Stanford University

### *Graduate Students Supervised (as lead advisor) (degree date or expected degree date)*

Steffi Minnis, M.A., Rice, May, 1986, now with an environmental consulting company, New Jersey
Lorinda Driskill (co-chair with R.E. Casey), M.A., Rice, May, 1987, now a geoscientist with Landmark Graphics
Amy Leventer, Ph.D., Rice, 1988, now Professor at Colgate University
Kim Miskell-Gerhardt, Ph.D., Rice, 1989, scientist with Exxon-Mobil, now retired
Richard C. Marty, Ph.D., Rice, 1989, now with an environmental consulting company
Carrie Stock, M.A., Rice, 1991, now with an environmental consulting company, North Carolina
Erika Frantz, M.A., Rice, 1993, scientist with BP Amoco
Carlos Azalgará (co-chair with A.W. Bally), M.A., Rice, 1994, now a geoscientist with Petrobras Venezuela
William Jones, M.A., Rice, 1995, now at University of Adelaide, Australia
Jennifer Rogers (now Jennifer Villinski), M.A., Rice, 1995, scientist with BP Amoco

Robb Houston, M.A., Rice, 1999, now with an environmental consulting company in Michigan  
 Charlotte Kelchner, M.A., Rice, 2004, now with Encyclopedia Britannica  
 Harold Rowe, Ph.D., Stanford, 2001, now Professor at University of Texas, Arlington  
 Lindley Zerbe, M.S., Stanford, 2002, Singapore Space Agency, now graduate school  
 Kevin Thiessen, Ph.D., Stanford, 2002, now Professor at University of Saint Thomas  
 Nancy Grumet Prouty, Ph.D., Stanford, 2004, Research Oceanographer, USGS Santa Cruz  
 David Munro, M.S., Stanford, 2004, now Ph.D. student at University of Washington  
 Michael Mastrandrea, Ph.D. student, Stanford, 2004, now Project Scientist, IPCC  
 Michael Lutz, Ph.D. student, Stanford, 2005, now at Rosenstiel School, U. Miami  
 Ashley Maloney, M.S., Stanford, 2005, now Ph.D. student at University of Washington  
 Jessica Kelleher, M.S., Stanford, 2007, Program Manager for Public Lands Defense at The Wyss Foundation  
 Elizabeth Scheimer, M.S., Stanford, 2007, now in U.S. Navy  
 Chris Moy, Ph.D., Stanford, 2010, now faculty member at the University of Otago  
 Matthew Long, Ph.D. 2010, Stanford, now at NCAR  
 Johnny Bartz, M.S., Stanford, 2011, now in Ph.D. program at RSMAS  
 Ethan Estess, M.S., Stanford, 2011, now with Hopkins Marine Station  
 Christina Riesselman, Ph.D., Stanford, 2011, now faculty member at University of Otago  
 Mike Osborne, Ph.D., Stanford, now with Stanford World Vision  
 Lida Teneva, Ph.D., Stanford, 2013, now with Conservation International, Hawaii  
 Sharmini Pitter, Ph.D., Stanford, 2013, now faculty member at Florida Agricultural and Mechanical University  
 Justine Kimball, Ph.D. student, Stanford, 2014, Knauss SeaGrant Fellow, now with NOAA  
 Sverre LeRoy, Ph.D. student, Stanford, 2017  
 David Koweek, Ph.D. student, Stanford, 2016, now Stanford Center for Ocean Solutions  
 Hans DeJong, Ph.D. student, Stanford, 2018, now teaching at American School in India  
 Neil Tangri, Ph.D. student, Stanford, 2019, now with an NGO in Berkeley, CA  
 Cassandra Brooks, E-IPER Ph.D. student, 2018, Stanford (secondary adviser with L. Crowder, E-IPER), now  
 Assistant Professor CU Boulder  
 Hannah Beutler, M.S. student, Stanford, 2018, now with Alaska Fish and Game  
 Dylan Anslow, M.S. student, Stanford, 2018  
 Anna Wietelmann, M.S. student, Stanford, 2018, now with SEA  
 Staci Lewis, E-IPER Ph.D. student, Stanford, 2019, now with COS/Stanford  
 Heidi Hirsh, Ph.D. student, Stanford, 2021 (expected)  
 Kristen Green, E-IPER Ph.D. student, Stanford (secondary adviser with L. Crowder, E-IPER), 2021 (expected)  
 Andrew Hennig, Ph.D. Student, Stanford University, 2021 (expected)  
 Josheena Naggea, E-IPER Ph.D. student, Stanford University (joint with K. Seetah), 2022 (expected)  
 Andrew Hume, E-IPER Ph.D. student, Stanford University (joint with J. Leape), 2022 (expected)  
 Alexy Khrizman, Ph.D. student, Stanford University  
 Laura Mediorreal, M.S. student Stanford University, 2020 (expected)  
 Andrea Contreras, M.S. student, Stanford University, 2020 (expected)

*Undergraduate research supervised*

Jennifer Villinski, now a Geoscientist with Exxon-Mobil  
 David Munro, now Ph.D. student at University of Washington  
 Lauren Rogers, now Ph.D. student at University of Washington  
 Tzvetie Erohina, Ph.D. at Stanford, now working for an Energy Company in Bakersfield, CA  
 Luna Federici, Fullbright scholar, New Zealand, graduate school University of Washington  
 Guy Marion, Ph.D., University of Queensland, now Vice President of Codesian Cloud Services  
 Melissa Roth, now IGERT Ph.D. student at UCSD  
 Julia Rosen, Graduate Student, OSU  
 Orion Lakota  
 Jessica McNally  
 Johnny Bartz  
 Sam Urmy  
 Alex Greer  
 Marra de Graff  
 Nick Wenner  
 Jessica Hinojosa  
 Anna Trugman

Samantha Larson  
Marra DeGraff  
Alex Stadnyk  
Adrian Archambeaux  
Caleb Cruse  
Claire Zabel  
Laura Crews  
Walter Torres  
Emma Hutchinson  
Meghan Shea  
Hannah Beutler  
Michael Burnett  
Holly Francis  
Dan Cryan  
Romain Screve  
George Sivulka  
Carolyn Chun  
Chloe Petersen  
Juan Pablo Spaventa

*Courses taught (some courses shared with other faculty)*

Introductory Oceanography  
Marine Geology  
Sedimentology  
Sedimentary Geochemistry and Mineralogy  
Field Geology  
Paleoceanography/Deep-Sea Sedimentation  
Stable Isotope Geochemistry  
Stratigraphy and Historical Geology  
Isotope Geochemistry  
Climate Variability and Forcing Mechanisms of the past 2000 years  
Seminar in Paleoceanography  
Seminar in Latin American Geology  
Seminar in organic rich shelf sediments  
Seminar in forearc and back arc sedimentary systems  
Seminar in Carbon Cycle Geochemistry  
Seminar in Oscillatory Behavior in Climate Systems  
Time Series Analysis in Geology  
El Nino; predictability and modeling  
Change in the Coastal Ocean: the view from Monterey Bay  
Seminar in Geological and Environmental Sciences  
Antarctic Marine Geology & Geophysics  
Science, history, and literature of polar exploration  
Stanford @ SEA  
Environmental Forum  
Science, History, and Literature of Polar Exploration  
Stable Isotope Laboratory  
Senior Seminar in Earth Systems  
In the Age of the Anthropocene: Coupled-Human Natural Systems of Southeast Alaska  
Approaching Palau: Project Ideation and background training  
Corals of Palau: Ecology, the Physical Environment, and Reefs at Risk  
The Uttermost Part of the Earth: The intersection of Nature and the human enterprise in Patagonia  
The Earth's 3<sup>rd</sup> Pole, Coupled Human-Natural Systems of the Khumbu Valley, Nepal  
Coral Reefs of the Western Pacific: Interdisciplinary Perspectives, Emerging Crises, and Solutions  
*University and Departmental Service*

Member, Earth System Science Structures Committee, 2020  
Faculty supervisor, Summer Bass Fellowship Program, 2020 (6 advisees)

Leader, Ad-Hoc Oceans Faculty Planning Group, 2018-present  
Member, Library Committee, SE3, 2018-present  
Active member, Stanford One Health Initiative, meetings and proposal writing, 2017-present  
Stanford VPTL, composed and appeared in online production on “How to write a grant proposal”, 2018  
Active engagement with Stanford Distinguished Careers Institute Members, 2019-present  
Participant Long-Range Planning Natural World Design Team, 2019  
Promotion Committee Member, ESS, 2018-2019  
Speaker, Stanford Club of Marin County, 2017  
Promotion Committee Chair, ESS, 2017  
Speaker, Stanford+Connects, 2016  
Speaker, Stanford+Connects, 2015, multiple events  
School of Earth, Energy, and Environmental Sciences Faculty Ambassador, 2015-present  
Member, Management Committee, Center for Ocean Solutions, Woods Institute, 2008-2016  
Member Committee on Undergraduate Standards and Policy (C-USP), 2011-2014  
Coordinator, EESS weekly seminar series, Spring, 2012  
Member, Faculty Search Committee for an appointment to “The Douglas Chair”, 2011-2014  
Member, Advisory Board, Haas Center for Public Service, 2010-2014  
Member, Vice-Provost’s “critical engagement” focus group, 2010-2011  
Member, Freshman and Sophomore Programs Advisory Committee, 2010-2014  
Member, Y2E2 Building Management Committee, 2008-2015  
Member, Faculty Search Committee for Director of the Center for Ocean Solutions, 2009-2010  
Member, Marine Chemistry Faculty Search Committee, 2008-2009  
Co-Chair, Climate Science Faculty Search Committee, 2008-2009  
Speaker, Stanford fund Events, New York City, Los Angeles, 2008  
Speaker, Stanford Alumni Clubs in Colorado, East Bay, 2008  
Speaker, Stanford Parents Day, 2008, 2009  
Speaker, Stanford Homecoming, 2007, 2009  
Member, Physical Oceanographer, Faculty Search Committee, 2006-2007  
Speaker, Stanford Parents Day, 2007  
Speaker, Stanford Alumni Clubs in San Diego, Los Angeles, 2006  
Speaker, Stanford Alumni Clubs in Wyoming, Monterey Bay, Philadelphia, Palo Alto, 2005  
Speaker, Stanford Admit Weekend, 2005, 2006, 2007, 2009, 2011  
Speaker, End of Oil Symposium at Stanford, 2006  
Chair, Joint SES/WIE Faculty search committee for a hire in climate science, 2005-2007  
Co-chair, University Interdisciplinary Environmental Grants Committee, 2004-2006  
Member, Faculty Leadership Committee, Woods Institute for the Environment, 2004-present  
Co-director, Interdisciplinary Graduate Program in Environment and Resources, Stanford University, 2003-2005  
Victoria P. and Roger W. Sant Director of the Earth Systems Program, Stanford University, 2003-2013  
Governor representing Stanford to the Joint Oceanographic Institutions (JOI), 2003-present  
Member, Provost’s Committee on the Environmental Initiative, 2002-2004  
Alternate Governor representing Stanford to the Joint Oceanographic Institutions (JOI), 2002-2003  
Founding Director, Interdisciplinary Graduate Program in Environment and Resources, 2001-2002  
Associate Chair, Geological and Environmental Sciences, 2000-2004  
Member, Committee on Undergraduate Admissions and Financial Aid, 2000-2004  
Elected member of Stanford Faculty Senate, 2000-2002  
Chair, Ion Microprobe faculty search committee, 1999-2001  
Member, Earth Sciences Advisory Council, 1999-present  
Member, Graduate Admissions Committee, Stanford GES, 1997-1999  
Member, Earth Systems Program steering committee, 1997-present  
Elected Alternate, Electoral Unit 2, Senate of the Academic Council, Stanford University, 1998-2000  
Chair, Curriculum Committee, Ocean Margins Initiative, 1998-2003  
Director, Stanford University Stable Isotope Lab, 1998-present  
Member, search committee for new faculty in the Ocean Margins Initiative, 1997-2000  
Senior Fellow, Institute for International Studies, 1998-present  
Speaker, Stanford Parents Weekend, 1998, 1999, 2000  
Speaker, Stanford Admit Weekend, 1998, 1999, 2000  
Chair, Committee on Environmental Curricula at Rice, 1995  
Member, Undergraduate Admissions Committee, Rice University, 1996-1997

Member, Provosts Task Force, Environmental Strategic Planning, 1996-1997  
Natural Sciences Divisional Advisor, Baker College, 1993-1997  
Master of Baker College, 1989-1994  
G&G Research Facilities Committee, 1993-1997  
Chair, Masters Search Committee for Brown College Master, 1992-1993  
Associate of Hanszen College, 1982-present (honorary since 1989)  
Residential Colleges Management Advisory Committee, 1993-1994  
Campus Safety Committee, 1991-1992  
Chair, Committee of Masters and Committee of Masters and Presidents, 1990  
Chair, Masters Search Committee for Sid Rich College Master, 1990-1991  
Secretary, Committee of Masters and Committee of Masters and Presidents, 1990  
Committee for development of a foundation course in science and engineering (NASC 101), 1987  
Undergraduate curriculum committee, 1986-1988  
Elected to Faculty Council, 1985-1986  
Elected to University Council, 1985-1986  
Ad-hoc committee for development of "coherent minor program", 1986  
Safety Officer, G&G Department, 1984-1987 & 1989-1991  
Chair, G&G Safety Advisory Committee, 1991-1995  
G&G Acting Undergraduate Advisor, 1987  
G&G Awards and Scholarship Committee, 1984-1985  
G&G 5-year plan Committee, 1986  
Ewing Chair Search Committee, 1985  
Resident Associate, Hanszen College, 1983-1987  
Director, Rice University Stable Isotope Laboratory, 1983-1997  
Instructor, Rice University Continuing Studies Program, 1982