

## Curriculum Vitae

### CRAIG RANDALL SMITH

**Address:**

Department of Oceanography  
University of Hawaii at Manoa

1000 Pope Road

Honolulu, HI 96822

Telephone: 808-956-7776 email: craigsmi@hawaii.edu

**Education:**

B.S., 1977, with high honors, Biological Science, Michigan State University  
Ph.D., Dec 1983, Biological Oceanography, University of California at San Diego, Scripps Institution of Oceanography

**Professional Experience:**

1975-1976: Teaching Assistant, Biological Science Program, Michigan State University  
1976: Summer Student Fellow, Woods Hole Oceanographic Institution  
1976-1977: Research Assistant, Microbiology Department, Michigan State University  
1977-1981: Research Assistant, Program for the Study of Sub- Seabed Disposal of Radioactive Waste, Scripps Institution of Oceanography  
1981-1983: Associate Investigator, O.N.R. grant entitled, "The Impact of Large Organic Falls on a Bathyal Benthic Community," Scripps Institution of Oceanography  
1983-1984: Postdoctoral Scholar, Woods Hole Oceanographic Institution  
1985-1986: Postdoctoral Research Associate, School of Oceanography, University of Washington  
1986-1988: Research Assistant Professor, School of Oceanography, University of Washington  
1988-1995: Associate Professor, Department of Oceanography, University of Hawaii at Manoa  
1995-1998, 2004-2007: Chair, Biological Oceanography Division, University of Hawaii at Manoa  
1997-1998, 2006-2007: Associate Chair, Department of Oceanography  
1995-present: Professor, Department of Oceanography, University of Hawaii at Manoa

**Major Research Interests:**

Seafloor ecology and oceanography including processes of disturbance, recruitment, and succession, bioturbation, carbon flux, deposit feeding, reducing habitats, sediment geochemistry, and benthopelagic coupling, anthropogenic impacts on the ocean

**Honors, Awards and Professional Recognition:**

- 1976: Summer Student Fellowship, Woods Hole Oceanographic Institution
- 1976: Summer Fellowship, Chesapeake Biological Laboratory (declined)
- 1976: Member, Phi Kappa Phi
- 1978: NSF Graduate Fellowship, Honorable Mention
- 1983-1984: Postdoctoral Scholar Award, Woods Hole Oceanographic Institution
- 1985: Invited participant, *Annual Review of Deep Seabed Mining Benthic Research*, National Oceanic and Atmospheric Administration, Newport, OR.
- 1986: Invited participant, *NOAA Re-Sedimentation Engineering Workshop*, National Oceanic and Atmospheric Administration, La Jolla, CA.
- 1986-1988: Biology Contingent Leader, Benthic Working Group, U.S. Global Ocean Flux Study, NSF.
- 1987: Invited session chair, *Gorda Ridge Symposium*, Portland, OR.
- 1988: Invited speaker, AGU-ASLO Meeting special session on *Biogeochemical Fluxes in the World Ocean - Benthic Fluxes*, New Orleans, LA.
- 1988: Invited participant, *GOFS Pacific Planning Meeting*, Monterey, CA.
- 1989: Invited participant, *Controlled Impact Experiment/Preservational Reference Area Workshop*, NOAA, La Jolla, CA.
- 1991: Invited leading contributor, NATO Advanced Research Workshop on *Deep-Sea Food Chains - Their Relation to the Global Carbon Cycle*, College Station, Texas.
- 1991: Invited to participate in the Sloan Foundation workshop on *The Ocean Option for Waste Disposal*, Woods Hole, MA.
- 1992: Invited speaker at the North American Paleontological Convention, *Deep-Sea Paleoecology Symposium*, Chicago, IL.
- 1993: Invited participant, Third RIDGE Theoretical Institute on *Physical, Biological and Geological Interactions Within Seafloor Hydrothermal Systems*, Big Sky, Montana.
- 1994: Invited participant, *NOAA Deep Seabed Mining Program Workshop*, Washington, DC.
- 1994: Provided invited testimony to the U.S. House of Representatives Subcommittee on Oceanography concerning *The U.N. Law of the Sea Treaty and reauthorization of the Deep Seabed Hard Mineral Resources Act*, Washington, DC.
- 1994: Invited speaker, US JGOFS Equatorial Pacific Program Synthesis Workshop, Scottsdale, AZ.
- 1994: Session Co-Chair, Fall AGU Meeting, *Seafloor Geochemistry and Biology: Coupling to the Surface Ocean*, San Francisco, CA.
- 1994: Invited speaker, Western Society of Naturalists Symposium, *Life Processes in the Deep-Sea*, Monterey, CA.
- 1995: Invited leading contributor, NATO Advanced Research Workshop on *Oceanography of the Equatorial Pacific*, Noumea, New Caledonia.
- 1995: Biological Oceanography Panel Member, National Science Foundation
- 1996: Invited speaker, National Center for Ecological Analysis and Synthesis Symposium on *Synthesis in Ecology; Applications, Opportunities, and Challenges*, Santa Barbara, CA.
- 1996-2000: Invited participant, *Deep-Sea Biodiversity Working Group*, National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.

- 1997: Distinguished Lecturer, Department of Oceanography, Texas A. & M. University, College Station, TX.
- 1998: Visiting Professor, Southampton Oceanography Center, University of Southampton, UK.
- 1998: Invited participant, SCOPE workshop on *Biodiversity Above and Below the Surface of Soils and Sediments*, Lunteren, Netherlands
- 1998: Invited Participant, workshop on *Environmental Guidelines for Deep-Sea Polymetallic Nodule Exploration*, International Seabed Authority, Sanya, China.
- 1998: Invited Speaker, Centre pour Faible Radioactivite, Gif-Sur-Yvette, France
- 1998: Invited Speaker, Department of Zoology, University of Oslo, Oslo, Norway
- 1998: Invited Speaker, Department of Zoology, University of Aberdeen, Aberdeen, Scotland
- 1998: Invited Speaker, IFREMER, Brest, France
- 1998: Invited Speaker, Christiniberg Marine Laboratory, Christiniberg, Sweden
- 1999: Invited Participant, workshop on *Future Environmental Studies on the Impacts of Manganese-Nodule Mining in the Deep-Sea*, International Seabed Authority, Kingston, Jamaica.
- 1999: Invited Participant, workshop on *Regional Patterns of Deep-Sea Biodiversity*, National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.
- 2000: Invited Participant, workshop on *Global Patterns of Deep-Sea Biodiversity*, National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.
- 2000-2002: Invited member, Technical Committee, CO<sub>2</sub> Ocean Sequestration Project
- 2001: Invited Speaker, Southampton Oceanography Center, University of Southampton, England
- 2001: Visiting Scholar, *Biological Oceanography Futures Program*, Scripps Institution of Oceanography
- 2002: Invited Speaker, AAAS Symposium on *Deep-Sea Biodiversity: Pattern, Scale and Conservation*, Boston, MA.
- 2002-2010: Steering Committee Member, ChEss (*Chemosynthetic Ecosystems*), *Census of Marine Life*
- 2003: Keynote speaker on deep-sea ecosystems, 5<sup>th</sup> International Conference on the Environmental Future, *Future of Aquatic Ecosystems*, Zurich, Switzerland, March 2003.
- 2003: Invited Speaker, *Underwater Mining Institute*, Jeju Island, South Korea.
- 2003: Invited Speaker, Symposium on Whales, *Whaling and Marine Ecosystems*, Santa Cruz, CA.
- 2003: Invited Participant, *Census of Marine Life Workshop on Deep-Sea Sediments*, Newport, OR.
- 2004: Invited Speaker, *NERC Deep Oceans Meeting*, London, United Kingdom
- 2004: Keynote Speaker, *Ecology of the Antarctic Sea Ice Zone Final Symposium*, Korcula, Croatia.
- 2004-2006: Pew Fellowship in Marine Conservation.**
- 2005: Invited Speaker, symposium on *Whale research: Fresh approaches yielding new perspectives*, American Association for the Advancement of Science Annual Meeting Washington, DC
- 2005: Invited Speaker, IFM-GEOMAR, Kiel, Germany; Alfred Wegener Institute, Bremerhaven, Germany; Max Planck Institute, Bremen, Germany; Hansewissenschaftskolleg Center for Climate and Oceanographic Research, Delmenhorst, Germany; Université Pierre et Marie Curie, Paris; Museum National d'Histoire Naturelle, Paris
- 2005: Invited contributor (with Tony Koslow) to United Nations Secretary General report on *Marine Biodiversity in Areas beyond National Jurisdiction: Threats to Ecosystems and Biodiversity caused by Human Activities*.

- 2005: Invited Speaker, *First DIVERSITAS Open Science Conference: Integrating biodiversity science for human well-being (Oceans of Biodiversity Symposium)*, Oaxaca, Mexico.
- 2005: Hanse Wissenschaftskolleg Fellowship, Max Planck Institute, Germany**
- 2005+: Editorial Board, *Marine Ecology*
- 2006: Klaus Wyrtki Outstanding Graduate Teaching Award, Department of Oceanography, University of Hawaii**
- 2006: Visiting Scholar, University of Barcelona and CSIC, Barcelona, Spain
- 2006: Invited participant, International Seabed Authority workshop on *Cobalt Crusts and the Diversity and Distribution Patterns of Seamount Faunas*, Kingston, Jamaica
- 2007: Invited participant and co-chair, *UNESCO Workshop on Biogeographic Classification Systems in Open Ocean and Deep Seabed Areas Beyond National Jurisdiction*, Mexico City
- 2008: Keynote speaker, *International Ocean Stewardship Forum*, Southampton, England
- 2008: Keynote speaker: *World Conference on Marine Biodiversity*, Valencia, Spain
- 2008: Visiting Scholar: Stazione Zoologica Anton Dohrn, Napoli and Ischia, Italy
- 2009+: Editorial Board, *Marine Biodiversity*
- 2009: Invited Speaker, WHOI Science and Policy Workshop, *Deep-Sea Mining of Seafloor Massive Sulfides: A Reality for Science and Society in the 21st Century*, Woods Hole, MA
- 2009: Visiting Scholar, University of Barcelona and CSIC, Barcelona, Spain
- 2009: Invited Speaker, Center for Microbial Oceanography: Research and Education Symposium *To the twilight zone and beyond: Life in the ocean's interior*, Honolulu
- 2010: Joint Best Poster Presentation in Antarctica – *Witness to the Past and Guide the Future: Tipping Points* session, XXXI SCAR Open Sciences Meeting, Buenos Aires.
- 2010+: Oversight Committee, INDEEP.
- 2011: Invited speaker, Gordon Research Conferences on Polar Marine Science, *Exploring Complex Systems in Polar Marine Science*, Ventura, CA
- 2012: Invited Keynote Speaker, IPY 2012 Montreal Conference, session on *Polar marine ecosystems: status and change*, Montreal, Canada
- 2013: Keynote speaker, XIth SCAR Biology Symposium, *Life in Antarctica: Boundaries and Gradients in a Changing Environment*, Barcelona
- 2014: Invited speaker, Geological Society of America Annual Meeting, session, *Antarctic Fjords, Interaction of Biotic, Oceanographic, and Cryospheric Systems under Changing Climate*, Vancouver, BC.
- 2014: Visiting Instructor, Friday Harbor Laboratories summer course, *Deep-sea Diversity, Connectivity and Ecosystem Function*, Friday Harbor, WA.
- 2015: Invited speaker, SCAR Cross-Program Workshop on *Interactions Between Biological and Climate Processes in the Antarctic*, Barcelona.
- 2016: Keynote Speaker, 3<sup>rd</sup> INCISE International Submarine Canyon Symposium, Victoria, BC, Canada.
- 2017: Senckenberg Prize in Nature Research, Frankfurt, Germany (10,000 Euros prize).**

### National/International Steering Committees

Chemosynthetic Ecosystems Project (ChEss), Census of Marine Life Census of the Diversity of Abyssal Marine Life (CeDAMar), Census of Marine Life, INDEEP Oversight Committee, NSF Polar

Research Vessel Committee, Deep Ocean Stewardship Initiative (DOSI) Steering Committee, DOSI Deep-Sea Mining Working Group Co-Leader, Deep Ocean Observing System (DOOS) Steering Committee.

### **Professional Societies:**

American Society of Limnology and Oceanography

Ecological Society of America

AAAS

### **Research Funding:**

*Colonization of manipulated deep-sea sediments in the central North Pacific*, (CoPI - L. Levin), Scripps Industrial Associates, 1/80-12/82, \$4,930.

*The impact of large organic falls on a bathyal benthic community*, ONR, 5/81-9/83, \$43,000.

*Development of benthic biological monitoring criteria for low-level radioactive waste disposal sites in the abyssal deep sea*, EPA, 9/84-8/86, \$36,404.

*A system for studying natural patterns and rates of disturbance and succession in deep-sea macrobenthos I* (CoPI with P. Jumars), NSF-OCE, 11/84-10/86, \$210,000.

*A system for studying natural patterns and rates of disturbance and succession in deep-sea macrobenthos II*, NSF-OCE, 11/86-10/88, \$140,000.

*Assessment of benthic faunal sensitivity to rapid sediment burial at Domes Site C in the abyssal Pacific*, NOAA, 2/87-9/90, \$102,000.

*Investigation of a sulfide-based community on whale remains at the deep-sea floor*, UH Seed Money Fund, 5/89-4/90, \$5,492.

*Macrobenthic community structure, secondary production, and modes and rates of sediment mixing in Kaneohe Bay Lagoon*, Hawaii DLNR, 1/90-12/91, \$44,000.

*Community structure and dynamics in a newly discovered deep-sea reducing habitat: lipid-rich whale bones*, NSF-OCE, 5/90-4/92, \$148,000.

*Benthic community disturbance and succession following simulated nodule mining in the equatorial Pacific*, NOAA Deep Seabed Mining Environmental Research Program, 12/90-1/93, \$340,000.

*The relationship of bioturbation, macrobenthos and seabed radionuclides to the flux and fate of organic carbon along the JGOFS equatorial Pacific transect*, (CoPI's - D. DeMaster and D. Kadko, separate budgets), NSF-OCE, 10/91-10/93, \$221,000.

*Sediment accumulation and bioturbation in Kaneohe Bay Lagoon based on Pb-210 geochronology*, (CoPI - G. McMurtry), Hawaii DLNR, 7/1/93-12/31/94, \$63,928.

*Recruitment patterns of marine benthic invertebrates in Mamala Bay: a process oriented measure of ecosystem response to pollution*, Mamala Bay Commission, 7/1/93-9/30/95, \$137,000.

*Structure, succession and phylogenetic affinities of deep-sea whale-fall communities on the northeast Pacific slope*, NOAA NURC Alaska, 3/1/95-2/28/97, \$109,000.

*Age-dependent mixing of deep-sea sediments: tests of mechanisms at three bathyal sites*, NSF-OCE (CoPI - D. DeMaster, separate budget), 12/1/95-11/30/98, \$280,000.

*Succession and gene flow in deep-sea whale-skeleton communities*, National Geographic Society, 9/15/95-9/14/98, \$43,900.

*Early succession, persistence and seep affinities of whale-fall communities on the northeast Pacific slope*, NOAA NURC Alaska, 5/1/97-2/28/02, \$168,000.

*Ecology of whale falls at the deep-sea floor*, British Broadcasting Corporation, 6/25/98-6/25/99, \$8,000.

*The impact of invading mangroves on Hawaiian soft-sediment communities*, Hawaii Sea Grant College Program, 3/1/99-9/30/01, \$60,617.

*Precious corals in the Hawaiian Islands: Management Units Determined by Molecular Genetics*, (G. K. Roderick, CoPI), Hawaii Sea Grant College Program, 3/1/99-12/31/02, \$54,994.

*Benthopelagic coupling on the West Antarctic Peninsula shelf: the impact and fate of bloom material at the seafloor*, NSF-DPP, 6/1/99 – 12/31/2002, \$316,528.

*EPA Graduate Fellowship for Amy R. Baco*, EPA, 9/1/99 – 8/31/02, \$64,000.

*Recolonization and succession of mangrove fauna following severe hurricane disturbance*, National Estuarine Research Reserve Graduate Research Fellowship (for Amanda Jones), NOAA, 6/1/99-5/31/03, \$49,500.

*Continuing assessment of the impact of invading mangroves on Hawaiian coastal ecosystems*, Hawaii Sea Grant College Program, 3/1/01-2/28/03, \$82,000.

*Collaborative research: Radiometric dating of whale bones – a tool for study of succession and persistence of whale fall chemoautotrophic assemblages*, NSF-OCE, 5/1/01 – 4/30/04, \$52,000.

*Succession and seep affinities of large-whale, kelp, and wood fall communities on the California slope*, NOAA-NURC Alaska, 3/1/02 – 2/28/05, \$231,517.

*Biodiversity, species ranges, and gene flow in the abyssal Pacific nodule province: predicting and managing the impacts of deep seabed mining*, J. M. Kaplan Fund, 1/3/02 – 6/31/06, \$290,000.

*Biodiversity, species ranges and gene flow in the CCFZ*, International Seabed Authority, 12/31/01 – 6/1/06, \$78,000.

*Environmental Impacts of Co<sub>2</sub> Injection into the Deep Norwegian Sea (2002)*, DOD – GeoCenters, 6/21/02 – 6/1/03, \$30,639.

*Collaborative Proposal: Using Radiocarbon Measurements of Benthic Megafauna as a Tool for Assessing Benthopelagic Coupling in the Marine Organic Carbon Cycle*, NSF- OCE, 1/1/03- 12/31/05, \$39,922.

*Recolonization and succession of wetland communities following mangrove removal*, Hawaii Sea Grant College Program, 3/1/03-2/28/06, \$70,000.

*Submarine Canyon and Scavenger Communities in the Main and Northwest Hawaiian Islands*, NOAA Office of Ocean Exploration, 7/1/03-6/30/06, \$136,000.

*Pew Fellowship in Marine Conservation*, Pew Charitable Trust, 2/1/04 – 1/31/07, \$150,000.

*Census of the Diversity of Abyssal Marine Life (CeDAMar) - I*. A. P. Sloan Foundation, Pedro Martinez-Arbizu, Co-PI, 4/1/04 – 6/30/06, \$660,000.

*Exploration of Chemosynthetic Habitats of the New Zealand Region*, NOAA Office of Ocean Exploration, 7/1/05-6/30/07, \$82,000.

*Development of Benthic Biological Parameters for Input into a Geological Model of the Manganese Nodule Province*. International Seabed Authority, 4/1/05-10/30/06, \$30,000.

*Census of the Diversity of Abyssal Marine Life (CeDAMar) - II*. A. P. Sloan Foundation, Pedro Martinez-Arbizu, Co-PI, 7/1/06 – 12/31/08, \$900,000.

*Invasion, pollution and energy flow: Benthic ecosystem function under anthropogenic stressors in The Hawaiian coastal zone*, Hawaii Sea Grant College Program, 3/1/07-2/28/08, \$114,000.

*Collaborative Research: Benthic faunal feeding dynamics on the Antarctic Shelf and the effects of climate change on benthic-pelagic coupling.* NSF-OPP, 9/15/2007-5/31/2012, \$447,135.

*Collaborative Research in IPY: Abrupt environmental change in the Larsen Ice Shelf system, a multidisciplinary approach – Marine Ecosystems.* NSF-OPP, 9/15/2007-8/31/2012, \$285,103.

*Census of the Diversity of Abyssal Marine Life (CeDAMar) - III.* A. P. Sloan Foundation, Pedro Martinez-Arbizu, Co-PI, 1/1/09 – 12/31/10, \$725,000.

*Collaborative Research in IPY: Abrupt environmental change in the Larsen Ice Shelf system, a multidisciplinary approach – Marine Ecosystems - Supplement.* NSF-OPP, 6/1/2011-8/31/2012, \$97,160.

*Collaborative Research: Biodiversity, connectivity and ecosystem function in organic-rich whale-bone and wood-fall habitats in the deep sea.* NSF-OCE, 9/1/2012-8/31/2017, \$569,256.

*Diversity and species ranges of benthic polychaetes from the Korean exploration claim area in the Clarian-Clipperton Zone.* Korea Institute of Ocean Science and Technology, 10/15/12-2/28/13, \$27,065.

*Benthic Biological Baseline Studies in the CCZ: Megafaunal, Macrofaunal and Microbial Community Structure, and Project Oversight,* Seabed Resources Development, Ltd., C. Smith, PI; J. Drazen, M. Church, and E. Vetter, Co-PIs, 6/1/13-8/31/11, \$2,502,642.

*Continued Studies of diversity and species ranges of benthic polychaetes from the Korean exploration claim area in the Clarian-Clipperton Zone,* Korea Institute of Ocean Science and Technology, 4/1/13 – 2/28/14, \$40,000.

*Using Radiochemical Data from Collapsed Ice Shelf Sediments to Understand the Nature and Timing of the Benthic Response to High-Latitude Climate Change,* NSF-OPP, 11/1/13-10/31/17, \$84,031.

*Studies of diversity and species ranges of benthic polychaetes from the Korean exploration claim area in the Clarian-Clipperton Zone – 2014,* Korea Institute of Ocean Science and Technology, 4/1/14 – 2/28/15, \$40,000.

*Collaborative Research: Fjord Ecosystem Structure and Function on the West Antarctic Peninsula - Hotspots of Productivity and Biodiversity? (FjordEco),* C. Smith, PI, B. Powell and M. Merrified, Co-PIs, NSF-OPP, 4/1/15-3/31/18, \$796,683.

*Ecosystem-wide survey of biodiversity, connectivity and ecosystem function across the deep seafloor biome of the CCZ to help assess and manage the impacts of polymetallic nodule mining,* C. Smith, PI, J. Drazen, Co-PI, Gordon and Betty Moore Foundation, 3/1/2017 – 2/28/2020, \$2,403,687.

*Environmental DNA biodiversity surveys across the abyssal seafloor in the CCZ,* E. Goetze, PI, C. Smith Co-PI, Pew Charitable Trusts, 9/1/2017 - 2/28/2019, \$137,171.

*Exploration of biodiversity and ecosystem structure on seamounts in the western CCZ,* J. Drazen, PI, C. Smith, Co-PI. NOAA Office of Ocean Exploration, 9/1/2017 – 8/31/2018, \$746,000

### **Leadership of Research Cruises as Chief or co-Chief Scientist (66):**

1981	R.V. SCRIPPS (Chief Scientist)	- S. California bight, three 3-d cruises
1982	R.V. LULU-ALVIN (Ch. Sci.)	- S. California Bight, three 5-d cruises
1982	R.V. SCRIPPS (Ch. Sci.)	- S. California Bight, 3 d
1983	R.V. ES1-SEA CLIFF (Ch. Sci.)	- S. California Bight, 6 d
1983	R.V. SCRIPPS (Ch. Sci.)	- S. California Bight, 3 d

1983	R.V. ALOHA (Ch. Sci.)	- S. California bight, 3 d
1984	R.V. TRANSQUEST- TURTLE (Ch. Sci.)	- S. California bight, 1 wk
1985	R.V. ATLANTIS II- ALVIN (Ch. Sci.)	- S. California Bight, two 1-wk cruises
1986	R.V. ATLANTIS II- ALVIN (Ch. Sci.)	- S. California Bight, 1 wk
1987	R.V. ATLANTIS II-ALVIN (Ch. Sci.)	- S. California Bight, two 10-d cruises
1987	R.V. ORB-RUM III (Co-Ch. Sci.)	- S. California Bight, 28 d
1988	R.V. ATLANTIS II- ALVIN (Ch. Sci.)	- S. California Bight, 1 wk
1991	R.V. ATLANTIS II- ALVIN (Ch. Sci.)	- S. California Bight, 1 wk
1991	R.V. YUZHGORGE LOGIYA (Co.-Ch. Sci.)	- Equatorial Pacific, 35 d
1992	R.V. SPROUL (Ch. Sci.)	- Southern California, 3 d
1992	R.V. MOANA WAVE (Ch. Sci.)	- HOT Station, 1 wk
1992	R.V. YUZHGORGE- LOGIYA (Ch. Sci.)	- Equatorial Pacific, 28 d
1992	R.V. THOMPSON (Co.-Ch. Sci.)	- Equatorial Pacific, 48 d
1994	R.V. LANEY CHOUEST (Ch. Sci.)	- Southern California, 10 d
1995	R.V. NEW HORIZON (Ch. Sci.)	- Southern California, 7 d
1996	R.V. ATLANTIS II- ALVIN (Ch. Sci.)	- S. California Bight, 1 wk
1996	R.V. ATLANTIS II- ALVIN (Ch. Sci.)	- S. California Bight, 5 d
1996	R.V. LANEY CHOUEST (Ch. Sci.)	- Southern California, 10 d
1996	R.V. KAIMIKAI-O-KANALOA (Ch. Sci.)	- Hawaiian Islands, 4 d
1996	R.V. LANEY CHOUEST (Ch. Sci.)	- Southern California, 8 d
1997	R.V. NEW HORIZON (Ch. Sci.)	- Southern California, 8 d
1997	R.V. ATLANTIS-ALVIN (Ch. Sci.)	- Southern California, 5 d
1998	R.V. WILLIAM A. McGAW (Ch. Sci.)	- Southern California, 2 d
1998	R.V. ATLANTIS-ALVIN (Ch. Sci.)	- Southern California, 5 d
1998	R.V. ATLANTIS-ALVIN (Ch. Sci.)	- Southern California, 8 d
1999	R.V. BALLENA (Ch. Sci.)	- Southern California, 2 d
1999	R.V. ATLANTIS-ALVIN (Ch. Sci.)	- Southern California, 7 d
1999	R.V. L.M. GOULD (Ch. Sci.)	- Antarctic Peninsula, 23 d
2000	R.V. N.B. PALMER (Chi. Sci.)	- Antarctic Peninsula, 21 d
2000	R.V. L.M. GOULD (Ch. Sci.)	- Antarctic Peninsula, 2 cruises of 23 d each
2001	R.V. L.M. GOULD (Ch. Sci.)	- Antarctic Peninsula, 23 d
2002	R.V. R.G. SPROUL (Ch. Sci.)	- Southern California, two cruises of 2 d
2003	R.V. NEW HORIZON (Ch. Sci.)	- Central Pacific, 34 d
2003	R.V. KOK (Ch. Sci.)	- Northwest Hawaiian Islands, 24 d
2003	R.V. WESTERN FLYER (Ch. Sci.)	- California, 2 wk
2003	R.V. KOK (Ch. Sci.)	- Main Hawaiian Islands, 2 wk
2004	R.V. WESTERN FLYER (Ch. Sci.)	- California, 2 wk
2005	R.V. WESTERN FLYER (Ch. Sci.)	- California, 1 wk
2006	R.V. KOK (Ch. Sci.)	- Main Hawaiian Islands, 2 wk
2007	R.V. Kaharoa (co-Ch. Sci.)	- New Zealand, 10 d
2008	R.V. L.M. Gould, (co-Ch. Sci.)	- Antarctic Peninsula, 28 d
2009	R.V.I.B. N.B. Palmer (Ch. Sci.)	- Antarctic Peninsula, 35 d
2009	R.V. L.M. Gould (co-Ch. Sci.)	- Antarctic Peninsula, 35 d

2011	R.V. L.M. Gould (co-Ch. Sci.)	- Antarctic Peninsula, 40 d
2013	R.V. Oceanus (Ch. Sci.)	- OR-WA margin, 12 d
2013	R.V. Melville (Ch. Sci.)	- Equatorial Pacific, 30 d
2014	R.V. Oceanus (Ch. Sci.)	- Northeast Pacific, 14 d
2015	R.V. Thompson (Ch. Sci.)	- Equatorial Pacific, 42 d
2015	A.R.S.V. L.M. Gould (Ch. Sci.)	- Antarctic Peninsula, 42 d
2016	R.V.I.B. N.B. Palmer (Ch. Sci.)	- Antarctic Peninsula, 33 d
2017	A.R.S.V. L.M. Gould (co-Ch. Sci.)	- Antarctic Peninsula, 35 d

Total time on shipboard plus Antarctic field expeditions ~1560 d, or ~4.3 y

### **Graduate Students Supported and Supervised:**

Steven Brumsickle (MS 1989), Bruce Bennett (MS 1990), Helmut Kukert (MS 1990), Shawn Doan (MS 1994), Paul Parnell (MS 1992, PhD 2000), Daniel Hoover (MS 1995), Robert Miller (MS 1997), Amy Baco (PhD 2002), Amanda Jones (MS 2000, PhD 2004), Sarah Mincks (PhD 2005), Bryan Nakahara (MS 2007), Angelo Bernardino (PhD 2009, shared with University of Sao Paulo), Fabio Cabrera deLeo (PhD 2012), Pavica Srzen (MS 2013, PhD candidate), Amanda Ziegler (PhD candidate), Emily Young (PhD candidate).

### **Postdoctoral Scholars Supported and Supervised:**

Paulo Sumida, Adrian Glover, Amanda Demopoulos, Sarah Mincks, Elizabeth Galley, Andrew Sweetman, Victor Evrard, Laura Grange, Diva Amon, Clif Nunnally

### **Courses Taught**

#### University of Hawaii

*OCN 430 Deep-Sea Biology* (co-instructor), 3 credits, 2013, 2015

*OCN 621 Biological Oceanography* (co-instructor), 3 credits, 2001 – 2014

*OCN 628 Benthic Biological Oceanography*, 4 credits, 1989 – 2006, 2008 – 2017

*OCN 630 Deep-Sea Biology* (co-instructor), 3 credits, 2009, 2011, 2013, 2015

*OCN 720 Biological-Physical Coupling in the Ocean*

*OCN 720 Productivity of the Ocean: Past and Present*

#### Short courses taught at other institutions

*Animal-Microbe-Sediment Interactions*, Friday Harbor Laboratories, University of Washington, 1988

*Sediment Geochemistry and Bioturbation: Bridging the Biological–Geochemical Gap*, University of Barcelona, 2006

*Benthic Ecological Processes in Our Changing Oceans: From Sediment Biogeochemistry to Climate Warming Deep-Sea Biodiversity*, University of Barcelona, 2009

*Deep-Sea Biodiversity, Connectivity and Ecosystem Function*, Friday Harbor Laboratories, University of Washington, 2014

**Scientific Publications (n ~ 165, Google Citations H-index = 58):**

- 1) Smith, C.R. and T.M.C. Present. 1983. *In vivo* marking of shallow-water and deep-sea amphipods by ingestion of bait mixed with fast green. *Marine Biology* 73: 183-192.
- 2) Smith, C.R. and S.C. Hamilton. 1983. Epibenthic megafauna of a bathyal basin off southern California: patterns of abundance, biomass and dispersion. *Deep-Sea Research* 30: 907- 928.
- 3) Levin, L.A. and C.R. Smith. 1984. Response of background fauna to disturbance and enrichment in the deep sea: a sediment- tray experiment. *Deep-Sea Research* 31: 1277-1285.
- 4) Smith, C.R. 1985. Food for the deep sea: utilization, dispersal and flux of nekton falls at the Santa Catalina Basin floor. *Deep-Sea Research* 32: 417-442.
- 5) Smith, C.R. 1985. Colonization studies in the deep sea: are results biased by experimental designs? Pages 183-190 in: *Proceedings of the Nineteenth European Marine Biological Symposium*, P.E. Gibbs, editor, Cambridge University Press, 541 pp.
- 6) Smith, C.R. 1986. Nekton falls, low-intensity disturbance and community structure of infaunal benthos in the deep-sea. *Journal of Marine Research* 44: 567-600.
- 7) Smith, C.R., P.A. Jumars and D.J. DeMaster. 1986. *In situ* studies of megafaunal mounds indicate rapid sediment turnover and community response at the deep-sea floor. *Nature* 323: 251-253.
- 8) Smith, C.R. and R. R. Hessler. 1987. Colonization and succession in deep-sea ecosystems. *Trends in Ecology and Evolution* 2: 359-363.
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(C. R. Smith is also author or co-author of >150 published scientific abstracts not listed here.)