

# Hugh William Ducklow

## *Curriculum Vitae*

### **Personal Information**

1. Name: Hugh William Ducklow Date: 24 January, 2015
2. Office address: Lamont-Doherty Earth Observatory  
Columbia University  
Geosciences 208  
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WWW: <http://www.ldeo.columbia.edu/user/hducklow>  
<http://pal.lternet.edu/>
3. Position: Professor, Department of Earth & Environmental Sciences

### **Education and Postdoctoral Training:**

- 1977:** Postdoctoral Fellowship. Harvard University. Research: Biocontrol of Schistosomiasis vector snails. Supervisor: Ralph Mitchell.
- 1977:** Ph.D.; Harvard University, Cambridge, MA; Division of Applied Sciences; Major field: Environmental Engineering. Advisor: Ralph Mitchell.
- 1974:** AM; Harvard University, Cambridge, MA; Division of Engineering and Applied Physics; Major field: Environmental biology.
- 1972:** AB; Harvard College, Cambridge, MA; Summa cum laude; Phi Beta Kappa; Concentration: History and Science.

### **Professional Positions:**

- 1977:** Post-doctoral research fellow, Division of Applied Sciences, Harvard University. Advisor: Professor Ralph Mitchell.
- 1980:** Research Associate, Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY.
- 1984:** Associate Research Scientist, Horn Point Environmental Laboratory, Cambridge, MD.
- 1991:** Full Professor, University of Maryland Horn Point Environmental Laboratory, Cambridge, MD.
- 1994:** Glucksman Professor of Marine Science, The College of William and Mary School of Marine Sciences and Virginia Institute of Marine Science, Gloucester Point VA.
- 2007:** Director, The Ecosystems Center, MBL, Woods Hole Ma 02543 and Professor, Dept of Ecology and Evolutionary Biology, Brown University
- 2013:** Professor, Dept of Earth and Environmental Sciences, Columbia University

### **Honors and Awards:**

- 1972:** Graduated Summa cum laude, Phi Beta Kappa, Harvard College.
- 1995:** Antarctic Service Medal
- 2002:** Elected Fellow of AAAS  
ISI Highly Cited researcher
- 2010:** ASLO John Martin Award for high impact paper in aquatic sciences (Fasham et al. 1990 below).

### **Invited Talks, past five years**

- 2014 H. Ducklow,** Western Antarctic Peninsula- Rapid Climate Change and an Ecosystem Near a Tipping Point, Lamont-Doherty Spring Public Lecture Series. Columbia University, 24 April.
- 2013 H. Ducklow,** Changing Times in the Cryosphere. Keynote Address, 5<sup>th</sup> Polar and Alpine Microbiology Meeting, Big Sky, MT, Sept 2013.
- 2013 H. Ducklow,** The Disappearing Cryosphere and Antarctica's Changing Ecosystems, invited presentation to Lamont-Doherty Director's Circle and Advisory Board, 20 June.
- 2013 H. Ducklow,** Recent climate warming and ecosystem transformation along the western Antarctic Peninsula, Department of Zoology, Southern Illinois University, Carbondale, IL. April 2013
- 2013 H. Ducklow,** Challenges and rewards of interdisciplinary ocean science: examples from Palmer LTER. Gordon Research Seminar on Polar Marine Science. Ventura, CA. March 2013 (Keynote lecture).
- 2013 H. Ducklow,** S. Stammerjohn, S. Doney and S. Sailley. The Changing Marine Ecosystem of the Western Antarctic Peninsula: Insights from Observations and Models. Gordon Research Conference on Polar Marine Science. Ventura, CA. March 2013.
- 2012 H. Ducklow,** The Changing Ecosystem of the Western Antarctic Peninsula. Duke University Marine Lab, December, 2012.
- 2012 H. Ducklow,** The Changing Ecosystem of the Western Antarctic Peninsula. Lehigh University, November, 2012.
- 2012 H. Ducklow,** The Changing Ecosystem of the Western Antarctic Peninsula. EcoSummit 2012, Ohio State University, September, 2012.
- 2012 H. Ducklow,** Ecosystem transformation in response to rapid climate change on the Antarctic Peninsula. Portland State University, May 2012.
- 2012 H. Ducklow.** Palmer Antarctica: Rapid climate change and microbial responses. University of Connecticut Department of Marine Science, April
- 2012 H. Ducklow.** Ecosystem transformation in response to rapid climate change on the Antarctic Peninsula. University of Michigan School of Natural Resources and Environment. March.
- 2011 H. Ducklow.** Rapid climate warming forces abrupt ecosystem shifts on the western Antarctic Peninsula. Ohio State University, Dept. of Earth Science. October.

- 2011 H. Ducklow.** Rapid climate change and microbial responses at Palmer, Antarctica. Cary Institute for Ecosystem Studies, Millbrook, NY. October.
- 2011 H. Ducklow** and D Steinberg. Climate change and ecosystem response on the western Antarctic Peninsula. Invited seminar at Alfred-Wegener Institute for Polar Research. Bremerhaven, Germany. July 2011.
- 2011 H. Ducklow.** Carbon export and flow through bacterioplankton in polar seas: why are they so low? Invited seminar at Woods Hole Oceanographic Institution, April 2011
- 2011 H. Ducklow.** Carbon export and flow through bacterioplankton in polar seas: why are they so low? Invited seminar at Lamont-Doherty Earth Observatory, Palisades NY, March 2011
- 2010 H. Ducklow.** Rapid Climate Change and Ecosystem Response at Palmer Station, Antarctica. Invited seminar, Univ. of Washington Dept of Oceanography, Nov. 2010 Seattle WA.
- 2010 H. Ducklow;** K. S. Baker; S. C. Doney; B. Fraser; D. G. Martinson; M. P. Meredith; M. A. Montes-Hugo; S. Sailley; O. Schofield; R. M. Sherrell; S. E. Stammerjohn; D. K. Steinberg Marine Ecosystem Response to Rapid Climate Warming on the West Antarctic Peninsula (Invited). American Geophysical union Annual Meeting, San Francisco, December 2010. Session GC43E-1004. Past and Present Dynamics of the Antarctic Peninsula Ice Cap System Posters (invited and submitted as a talk, session switched to all posters).
- 2010 Ducklow, HW.** Rapid Climate Change and Ecosystem response at Palmer Station, Antarctica,” Invited Opening Address, IMCoast Workshop, Cordoba Argentina 7-10 August, 2010 (European Science Foundation and Instituto Antarctica Argentina).
- 2010 Ducklow, HW.** Rapid Climate Change and Ecosystem response at Palmer Station, Antarctica,” Invited Keynote Presentation. SCAR Open Science Conference, Buenos Aires, 2-6 August, 2010.
- 2010 Ducklow, HW.** Acceptance speech for ASLO Martin Award, Santa Fe, NM, June 2010.
- 2010 Ducklow, HW.** WHOI Department of Biology. Invited Seminar.
- 2010 Ducklow, HW.** Invited distinguished guest lecturer, Rutgers University Marine Sciences graduate students (one per year).
- 2010 Ducklow, HW.** Invited distinguished guest lecturer, University of Georgia Marine Sciences graduate students (one per semester).
- 2010 Ducklow, HW.** “Long-term observations of climate change and ecosystem response along the western Antarctic Peninsula, 1975-2009.” AGU Ocean Sciences Meeting, Portland, OR (Invited).
- 2009 Ducklow, HW.** “Organic Matter Utilization in Polar Seas” Ocean Carbon Biogeochemistry Southern Ocean Scoping Workshop, Princeton University. Invited Plenary
- 2009 Ducklow, HW.** “Rapid Climate Warming and Ecosystem Response on the West Antarctic Peninsula.” Harvard Forest, Petersham, MA. Invited seminar.
- 2009 Ducklow, HW.** “Rapid Climate Warming and Ecosystem Response on the West Antarctic Peninsula.” Harvard Extension School. Invited lecture.
- 2009 Ducklow, HW.** “Crossing Decadal Time Scales: Antarctica” Gordon Conference on Polar Oceanography. Lucca, Italy. Invited Plenary.

## Service on Committees and Institutional Boards

Controls over Ocean Mesopelagic Interior Carbon Storage (COMICS). Chair, External Advisory Board, for UK-NERC, 2014 - .

Ocean Carbon Biogeochemistry Scientific Steering Committee, 2013 -

National Science Foundation, Office of Polar Programs Blue Ribbon Panel for Future Antarctic Science 2011-12 (Norman Augustine, Chair; appointed by White House Science Advisor and OSTP)

National Academy of Sciences, Polar Research Board, Committee on Future Science Opportunities in Antarctica and the Southern Ocean (Warren Zapol, Chair). 2010-11.

External Review RCEC, Academia Sinica, Taiwan, 2011

UNOLS Polar Research Vessel Committee, 2011

National Academy of Sciences, Organizing Committee for Polar Research Board Frontiers in Polar Science Workshop on Polar Climate Change, 2010.

NSF Biological Oceanography Proposal Panel, 2010

Long Term Ecological Research Program, Executive Board, 2009-2012. Science Council, 2002- External Review Panel, National Academy of Sciences, NRC Polar Research Board, 2009-10.

Chair, External Review Panel, Scripps Institution of Oceanography and Graduate School of Oceanography, 2009.

External Review Panel, The Nicholas School of the Environment, Duke University, 2008.

External Review Panel, Texas A&M Department of Oceanography, 2008 (Jim Yoder, WHOI, Chair)

Committee on the Design of the Martha Muse Award to Support the Advancement of Antarctic Researchers. US National Academy of Sciences, Polar Research Board. April, 2008. Washington DC.

Scientific Committee for the IGBP, Member, 2000 - 2003

US National Academy of Sciences Panel on Smithsonian Scientific Research, 2002-3.

Advisor: NATO Science for Stability Project, "TU-Black Sea" 1993 - 2000 .

Interagency Carbon Cycle Science Plan Steering Committee (C. Field, Chair), 2000 - 2004

Nominee, President-elect, American Society for Limnology and Oceanography (ASLO), 2000

US National Academy of Sciences Panel on Oceanic Carbon (T. Takahashi, Chair). term 1992-**1995**.

NATO Advanced Study Institute on Biogeochemical Modeling, Member, Organizing Committee, **1991 - 92**. (G. T. Evans, Chair, meeting in Bonas France, May **1992**).

ICSU/IGBP/SCOR Committee for the Joint Global Ocean Flux Study (JGOFS) Member, Scientific Steering Committee, terms **1990 - 1992**, **1996-1998**, Executive Scientist, **1993-94**. Vice-Chair, **1996-99**; **Chair, 2000-2003**

NATO Advanced Research Institute on Protozoans and Their Roles in Marine Processes, Plymouth, UK, **1988**. Member, Organizing Committee - (P.C. Reid, Chair, meeting in Plymouth, UK, August 1988).

US National Academy of Sciences review panel for the National Oceanographic Data Center (V. Zlotnicki, Chair). **1990**.

United States Senate Panel on Global Change and the Oceans, Sen. John Kerry, Chmn., April, **1989**. (Expert testimony).

US National Academy of Sciences panel on "Reducing global warming by enhancing oceanic primary production," (R. Barber, chair.) **1989**.

US National Academy of Sciences Committee on Global Change, working group on biogeochemical processes (J. Baker, chair), **1989**.

Joint Global Ocean Flux Study (US JGOFS), Member of Steering Committee Oct. **1985-2002**; Member US JGOFS Executive Committee, **1989-2002**. Chair, **1995 -1999**.

NASA SeaWiFS Prelaunch Science Advisory Working Group, **1988**.

### **Editorial Boards**

Editorial Board, *Applied and Environmental Microbiology*, (American Society of Microbiology), **1981- 87**.

Editor (Biology), *Journal of Geophysical Research (Oceans)*, (American Geophysical Union), term **1991-1994**.

Editor Selection Board, *Global Biogeochemical Cycles*, (American Geophysical Union), **1995, 1997**.

Guest Editor, *Deep-Sea Research II* Special Volumes **1992, 2002, 2006, 2008**.

Guest Editor, *Oceanography* Special Volume on US Antarctic Oceanography, **2012**.

Editorial Board, *Microbial Ecology*, **1994 - 2006**

Editorial Board, *Marine Microbial Foodwebs and Aquatic Microbial Ecology*, **1992 – 1997**.

Editorial Board, *Aquatic Microbial Ecology*, **2007 – present**

Editorial Board, *Ecosystems*, **2014 -**

## **Classroom Teaching.**

### **Columbia University**

**2014 EESC BC3800x, EEEB W3991/2**, “Environmental Science, Biology and Policy, Senior Thesis seminar” (3 pts, 59 students, w/ M. Stute, S. Pfirman and 4 others).

**2014 EESC G6823**, “Microbial Oceanography” (3 pys, 9 students; w/ S. Dyhrman).

**2013 EESC G9505 001**, “Seminar: Readings in Plankton Ecology, (1 point, 6 students)

### **The Ecosystems Center**

**2007 – 12** Lectures and student mentoring in Semester in Environmental Sciences, 2007-12. Also hosted several SES students on trips to Antarctica.

### **Brown University**

**2010** guest lectures in ENV5 0490 Environmental Science in a Changing World (O. Sala)

**2009** guest lecture in BIOL1460. “Microbial Diversity in the Environment.” (J. Rich).

**2009** guest lectures in ENV5 0490 Environmental Science in a Changing World (O. Sala)

**2008** guest lectures in ENV5 0490 Environmental Science in a Changing World (O. Sala)

### **College of William & Mary, School of Marine Sciences:**

**2007** MS 526, “Principles of Biol. Oceanography,” (co-taught with E. Duffy), 3 cr., 15 students

**2006** PUBP 600, “Principles of Environmental Science with D Taylor. (3 cr, 8 students)

**2005** PUBP 600, “Principles of Environmental Science with D Taylor. (3 cr, 8 students)

**2005** MS 652, “Plankton Ecology” with W Smith and K Tang (3 cr, 5 students)

**2005** MS 526, “Principles of Biol. Oceanography,” (co-taught with E. Duffy), 3 cr., 15 students

**2004** no courses taught

**2003** INTR150W-03 Freshman Seminar (at W&M), Fall, 4 credits, 15 students

**2003** MS 652, “Topics in plankton ecology” 3 cr. , Fall, 5 students (with D Steinberg)

**2003** MS 526, “Principles of Biol. Oceanography,” (co-taught with E. Duffy), 4 cr., 8 students

**2002** MS 526, “Principles of Biol. Oceanography,” (co-taught with E. Duffy), 4 cr., 9 students

**2001** MS 652, “Topics in plankton ecology” 3 cr. , Fall, 6 students (with D Steinberg)

**2001** MS 697-X, “Antarctic Sea Ice Processes” (2 cr, 2 students)

**2000** MS 698-4, “Ideas on Nature in American Society” (co- w/ Bronk, Taylor), 1 cr, 7 students

**2000** MS 526, “Principles of Biol. Oceanography,” (co-taught with E. Duffy), 4 cr., 9 students

**1999** MS 652, “Topics in plankton ecology” 3 cr. , Fall, 6 students

**1999** MS 598, “Modeling in FORTRAN,” 1 cr., Summer, 2 students

**1999** MS 597, “Polar Oceanography,” w/ W. Smith, 1 cr., Spring, 9 students.

**1999** MS 698, “Modeling of Nature,” w/ E. Duffy, 2 cr., Spring, 5 students.

**1998** MS 697, “Ecological Plankton Modeling,” 3 cr., Spring, 1 student

**1998** MS 526, “Principles of Biol. Oceanography,” (co-taught with E. Duffy), 4 cr., 8 students.

**1998** MS 697, “Methods and techniques in microbial ecology,” 3 cr., Spring, 4 students

1997 MS 652, "Topics in plankton ecology" 3 cr. , Fall, 7 students  
 1997 MS 698-02, "Biogeochemistry Seminar" 1 cr., Spring, (team taught) 18 students.  
 1997 MS 697-??, "Methods and techniques in bacterioplankton ecology" 3 cr. 5 students.  
 1997 MS 526, "Principles of Biological Oceanography" 3 cr., Spring, (co-instructor) 10 students  
 1996 MS 526, "Principles of Biological Oceanography" 3 cr., Spring, (co-instructor) 12 students  
 1995 MS 526, "Principles of Biological Oceanography" 3 cr., Spring, (co-instructor) 12 students

**Recent Invited lectures in other schools & classes:**

Harvard Extension School, ENVR E-130. "Global Climate Change: The Science, Social Impact and Diplomacy of a World Environmental Crisis" (W Moomaw and T Weiskel). April, 2009

Sea Education Association, Woods Hole, 2008-9-10.

Univ of New Mexico, BIOL 405/505 Ecosystem Dynamics (R Waide), 30 April, 2008.

**Training Record (graduate students advised)**

<b>Name</b>	<b>Grad</b>	<b>Degree</b>	<b>Thesis Topic</b>	<b>Current Position</b>
<b>University of Maryland:</b>				
Fuh-Kwo Shiah	1994	PhD	Estuarine Microbial Ecology	Nat Univ Taiwan
Craig Carlson	1994	PhD	Oceanic bacterial production	UCSB
Alison Bryant	1996	MSc	Experimental microbial ecology	Horn Point, MD (RA)
<b>College of Wm &amp; Mary:</b>				
Gary Schultz.	1999	Ph.D.	York River Bacteria	
Matthew Church	1999	MS	Antarctic bacteria	Univ Hawaii
Peter Countway	1999	MS	Coral reef bacteria	USC (Post doc)
Leigh McCallister	2002	Ph.D.	Estuary biogeochem	VA Commonwealth
Jessica Morgan	2003	MS	Microb. Ecol of the Black Sea	NOAA
Matthew Church	2003	Ph.D.	Microb Ecol of the N. Pacific	Univ Hawaii
Jacques Oliver	2005	Ph.D.	Bacterial growth and iron limitation	NOAA
Robert Daniels	2003	MS	Foodweb modeling	NOAA
Amy Chiuchiolo	2003	MS	Antarctic microbial ecology	Montana State Univ (RA)
Heidi Geisz	2010	PhD	Antarctic seabird ecology	Knauss Fellow, NOAA
<b>Brown-MBL:</b>				
Yawei Luo	2009	Ph.D.	Ecological Modeling (Oceanic bacteria)	WHOI (postdoc)
Kristen Myers	2009	MSc	Antarctic microbial ecology	Portland State Univ (RA)
Catherine Luria	--	PhD	Antarctic microbial ecology	--
<b>Columbia Univ:</b>				
Hyewon Kim	--	PhD	Antarctic marine ecology	--

## Training Record (postdoctoral fellows advised)

<b>Name</b>	<b>Years</b>	<b>Research Topic</b>	<b>Current Position</b>
Emily Peele	1988-92	Amazon River bacteriology	Univ West. Washington
Martin Montes-Hugo	2006-09	Antarctic Phytoplankton Ecology	Univ Quebec a Rimouski
Mirko Lunau	2009-10	Bacterial nitrogen cycling	AWI, Bremerhaven
Jennifer Brum	2010-11	Marine viruses (Polar Postdoc)	Univ Arizona
Stephanie Wilson	2010-11	Amundsen Sea Polynya Experiment	Univ College N Wales,
Mike Stukel	2011-13	Particle export and Thorium-234	Florida State Univ.
Shellie Bench	2012-14	Phytoplankton Genomics	Current postdoc
Jeff Bowman	2014-16	Bacteria-phytoplankton interactions	Current postdoc



## Extramural Funding

Award term: 2014-20  
Title: LTER Palmer, Antarctica (PAL): Land-Shelf-Ocean Connectivity, Ecosystem Resilience and Transformation in a Sea-Ice Influenced Pelagic Ecosystem  
Agency: NSF-OPP  
Amount: \$6,761,996

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Award term: 2011-14  
Title: The seasonal cycle of export production in an Antarctic coastal marine ecosystem  
Agency: NSF-OPP  
Amount: \$411,492

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Award term: 2009-2012  
Title: Collaborative research aboard Icebreaker Oden: ASPIRE (Amundsen Sea Polynya International Research Expedition)  
Agency: NSF-OPP  
Amount: \$259,627

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Award term: 2009-2012  
Title: MRI-R2: Acquisition of Trace Gas and Aerosol Instrumentation for Ecosystem Analysis  
Agency: NSF-DBI  
Amount: \$418,048

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Award term: 2008 - 2014  
Title: Palmer Antarctica Long Term Ecological Research Program  
Agency: NSF-OPP  
Amount: \$5,640,000 (Lead PI with 7 other PIs). plus various supplements

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Award term: 2007 - 2010  
Title: IPY: Collaborative Research: Bacterioplankton genomic adaptations to Antarctic winter  
Agency: NSF-OPP (PI)  
Amount: \$230,000 (MBL portion, with A. Murray, Desert Research Inst, NV)

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Award term: 2002 - 2008  
Title: Palmer Antarctica Long Term Ecological Research Program  
Agency: NSF-OPP  
Amount: \$4,200,000 (Lead PI with 7 other PIs). plus various supplements

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Award term: 2002 - 2007  
Title: "PARADIGM: The Partnership for Advancing Interdisciplinary Global Modeling." (with L Rothstein, URI and many co-PI's)  
Agency: ONR - NOPP  
Amount: \$353,805 of \$5,000,000

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Award term: 2001-2004  
Title: Collaborative Research: Ecosystem structure, biogeochemical fluxes and vulnerability to climate change perturbations.  
Agency: NSF OCE (Co-PI)  
Amount: \$101,188 (w/ M. Roman HPEL & G. Jackson, TAMU).

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Award term: 2001-2003

Title: Transport and Fate of Persistent Organic Pollutants (POPs) in Coastal Antarctic Seas  
Agency: NSF OPP (co-PI)  
Amount: \$294,636 (w/ R. Dickhut).

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Award term: 2001-2003  
Title: Transport and transformation of DOC in the NE Atlantic Ocean  
Agency: NSF OCE (PI).  
Amount: \$143,318

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Award term: 2001-2003  
Title: Bacterial and DOC responses to iron enrichment in the Southern Ocean  
Agency: NSF OCE/OPP  
Amount: \$303,172 (w/ W. Smith, co-PI).

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Award term: 2000 - 2002  
Title: "Dissertation Research: Identifying the sources and ages of organic matter supporting estuarine bacterial production: A novel multiple isotope approach."  
Agency: NSF-DEB (L McCallister Diss Res. Improv. Grant, PI)  
Amount: \$9,495.

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Award term: 1999 - 2002  
Title: Modeling Physical-Biogeochemical Interactions in the Black Sea Pelagic Ecosystem."  
Agency: NSF-OCE (PI)  
Amount: \$105,614.

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Award term: 1999 - 2002  
Title: "US JGOFS SMP: Constraining and understanding bacterial biomass and production variability in ocean ecosystems."  
Agency: NSF-OCE (PI)  
Amount: \$300,000.

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Award term: 1999 - 2000  
Title: Planning for Coupled Physical Biological Modeling Node: A 'Phase A' National Ocean Partnership Program.  
Agency: ONR (URI Subcontract) (Co-PI)  
Amount: \$9,630.

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## **Oceanographic Cruise and Other Field Experience:**

- 2014** LM GOULD 14-01 January-February, 2014. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Co-Chief Scientist).
- 2013** LM GOULD 13-01 January-February, 2013. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2012** LM GOULD 12-01 January-February, 2012. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2011** NB PALMER 10-05 November 2010-January 2011. Amundsen Sea International Polynya Expedition (ASPIRE). Punta Arenas, Chile – McMurdo, Antarctica. (52 days, project represented by Anton Post and Stephanie Wilson, MBL).
- 2011** LM GOULD 11-01 January-February, 2011. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2010** LM GOULD 10-01 January-February, 2010. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2009** LM GOULD 09-01 January-February, 2009. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2008** Palmer Station, July – September, 2008. IPY Winter Microbes. (Station Science Leader)
- 2007** LM GOULD 07-01 January-February, 2007. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2006** Palmer Station, February – March and October – November, 2006. Palmer LTER
- 2006** LM GOULD 06-01 January-February, 2006. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days)
- 2005** Palmer Station, October – November, 2005. Palmer LTER.
- 2005** LM GOULD 05-01 January-February, 2005. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2004:** Palmer Station, February – March, 2004. Palmer LTER.
- 2004:** Palmer Station, October – November, 2004. Palmer LTER (Station Science Leader)
- 2004** LM GOULD 04-01 January-February, 2004. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days; Chief Scientist).
- 2003** LM GOULD 03-01 January-February, 2003. Palmer LTER. Punta Arenas, Chile – Punta Arenas (40 days)
- 2002-03:** Palmer Station, October 2002 – April, 2003. Palmer LTER. (Station Science Leader)
- 2002** Palmer Station, January – February, 2002. Pollutants in Antarctic Foodweb.
- 2001** NB Palmer, NBP 01-10. Palmer LTER Sea Ice Cruise, Sept – Nov 2001.
- 2001** RRS DISCOVERY. Southampton, England – Lerwick, Shetlands. Faeroes-Iceland-Scotland Ecosystem Research (FISHES) Project with Deacon Division (Southampton Oceanography Centre), May, 2001.

- 1997** NB PALMER, Christchurch, NZ – Christchurch (Ross Sea). JGOFS AESOPS 3, April – May 1997 (Chief Scientist).
- 1996** NB PALMER, Christchurch, NZ – Christchurch (Ross Sea). JGOFS AESOPS 1, October – November, 1996.
- 1995** RV Thomas Thompson, Muscat, Oman – Muscat (Arabian Sea). JGOFS Arabian Sea Expedition, March - April, 1995.
- 1995** NB PALMER, Christchurch, NZ – Christchurch (Ross Sea). JGOFS AESOPS 1, December, 95 – January, 1996.
- 1994** NB PALMER, Christchurch, NZ – Christchurch (Ross Sea). November – December, 1994.
- 1992** RV Thomas Thompson, Honolulu – Tahiti (Equatorial Pacific). JGOFS EQPAC Time Series 2, October, 1992.
- 1992** RV Thomas Thompson, Tahiti – Honolulu (Equatorial Pacific). JGOFS EQPAC Time Series 1, March, 1992.
- 1989** RV ATLANTIS II. Azores – Reykjavik (North Atlantic). JGOFS North Atlantic Bloom Experiment (NABE). May-June, 1989 (Chief Scientist).
- 1986** RRS CHARLES DARWIN. Seychelles – Muscat, Oman. UK Arabian Sea Expedition. October, 1986.
- 1984** RV GYRE. Norfolk –Norfolk. Chesapeake Bay Plume (MECCAS Experiment), 3 cruises in June – September, 1984.
- 1984** RV OCEANUS. Norfolk –Norfolk. Chesapeake Bay Plume (MECCAS Experiment), April, 1984.
- 1983** Australian Institute of Marine Science, Great Barrier Reef. Microbial Ecology of a Coral Reef (MECOR Experiment). August, 1983.
- 1982** RV KNORR. Woods Hole – Woods Hole. Sargasso Sea, NE US Slope Water. (Warm Core Rings Experiment). 4 cruises KNORR 93, 95, 97, 98 in April – October, 1982.
- 1981** RV KNORR. Woods Hole – Woods Hole. Hudso River Plume. March, 1981.
- 1981** Johore Bahru, Malaysia. Research on Mangrove / Prawn Aquaculture systems (w/ Jim Simpson).
- 1978-79** Rockefeller Research Institute, Morne Fortune, St Lucia. Field research on bacterial control of Schistosomiasis vector snails, *Biomphalaria glabrata*.
- 1977** University of Puerto Rico, Rio Piedras, PR. Field research on bacterial control of Schistosomiasis vector snails, *Biomphalaria glabrata*.
- 1976** Bellairs Research Institute (McGill Univ). St. James, Barbados. Research on coral – microbe interactions (several trips).
- 1975** Weizmann Institute of Science, Rehovot, Israel and Steinitz Marine Lab, Eilat Israel. Research on coral – microbe interactions (several trips). March - November, 1975.

1973 – 74, 78 Bermuda Biological Station, St Georges, Bermuda. Research on coral – microbe interactions (several trips).

### Peer-Reviewed Publications:

Refereed publications in journals and books (student and postdoc coauthors underlined).

- 2015 Wilson SE, Swalethorp R, Kjellerup S, Wolverson MA, **Ducklow HW**, et al. 2015. Meso- and macro-zooplankton community structure of the Amundsen Sea Polynya, Antarctica (Summer 2010–2011). *Elementa Science of the Anthropocene* 3: 000033.
- 2014 Luria CM, **Ducklow HW**, Amaral-Zettler LA. 2014. Marine bacterial, archaeal and eukaryotic diversity and community structure on the continental shelf of the western Antarctic Peninsula. *Aquatic Microbial Ecology* 73: 107-121.
- 2014 Delmont TO, Hammar KM, **Ducklow HW**, Yager PL, Post AF. 2014. Bacterial community structures in the Amundsen Sea Polynya are shaped by *Phaeocystis Antarctica* blooms. *Frontiers in Microbiology* 5: 1-13. doi: 10.3389/fmicb.2014.00646.
- 2014 Tortell PD, Asher EC, **Ducklow HW**, Goldman JAL, Dacey JWH, Grzyski JJ, Young JN, Kranz SA, Bernard KS, Morel FMM. Metabolic balance of coastal Antarctic waters revealed by autonomous pCO<sub>2</sub> and ΔO<sub>2</sub>/Ar measurements. *Geophysical Research Letters* 41:2014GL061266
- 2014 Saba GK, Fraser WR, Saba VS, Iannuzzi RA, Coleman KE, Doney SC, **Ducklow HW**, Martinson DG, Miles TN, Patterson-Fraser DL, Stammerjohn SE, Steinberg DK, Schofield OM. 2014. Winter and Spring Controls of the Summer Marine Food Web in the Western Antarctic Peninsula. *Nature Communications* 5:4318
- 2014 Constable AJ, Melbourne-Thomas J, Corney SP, Arrigo KR, Barbraud C, Barnes DKA, Bindoff NL, Boyd PW, Brandt A, Costa DP, Davidson AT, **Ducklow HW**, Emmerson L, Fukuchi M, Gutt J, Hindell MA, Hofmann EE, Hosie GW, Iida T, Jacob S, Johnston NM, Kawaguchi S, Kokubun N, Koubbi P, Lea M-A, Makhado A, Massom RA, Meiners K, Meredith MP, Murphy EJ, Nicol S, Reid K, Richerson K, Riddle MJ, Rintoul SR, Smith WO, Southwell C, Stark JS, Sumner M, Swadling KM, Takahashi KT, Trathan PN, Welsford DC, Weimerskirch H, Westwood KJ, Wienecke BC, Wolf-Gladrow D, Wright SW, Xavier JC, Ziegler P (2014) Climate change and Southern Ocean ecosystems I: How changes in physical habitats directly affect marine biota. *Global Change Biology* DOI: 10.1111/gcb.12623.
- 2014 Pedulli M, Bisagni JJ, **Ducklow HW**, Beardsley R, Pilskaln C (2014) Estimates of potential new production (PNP) for the waters off the western Antarctic Peninsula (WAP) region. *Continental Shelf Research* 34:54-69.
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- 2014** Meredith, M. P.; Venables, H. J.; Stammerjohn, S. E.; Leng, M. J.; Ducklow, H. W.: SPATIAL AND TEMPORAL CHANGES IN THE FRESHWATER INPUTS TO THE OCEAN WEST OF THE ANTARCTIC PENINSULA. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28.
- 2014** Yager, P. L.; Sherrell, R. M.; Alderkamp, A. C.; Ingall, E. D.; Ducklow, H. W.: NET COMMUNITY PRODUCTION AND EXPORT IN THE AMUNDSEN SEA POLYNYA (WESTERN ANTARCTICA); WITH COMPARISONS TO ARCTIC POLYNYAS AND A LINK TO CLIMATE SENSITIVITY. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28.
- 2014** Brum, J. R.; Hurwitz, B. L.; Schofield, O.; Ducklow, H. W.; Sullivan, M. B.: SEASONAL TIME BOMBS: TEMPERATE VIRUSES DOMINATE THE SOUTHERN OCEAN AND SUBSTANTIALLY AFFECT MICROBIAL DYNAMICS. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28.
- 2014** Pedulli, M.; Ducklow, H. W.; Bisagni, J. J.; Stukel, M. R.; Pilskaln, C. H.: EXPORT PRODUCTION FOR THE WATERS OFF THE WESTERN ANTARCTIC PENINSULA (WAP) REGION. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28.
- 2014** Schofield, O. M.; Saba, G.; Finkel, Z.; Irwin, A.; Ducklow, H.: BIOGEOCHEMICAL AND ECOLOGICAL CONSEQUENCES OF PHYTOPLANKTON COMMUNITY COMPOSITION ALONG A MELTING WEST ANTARCTIC PENINSULA. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28.
- 2014** Delmont, T.; Ducklow, H.; Yager, P.; Post, A.: BACTERIAL COMMUNITY STRUCTURES IN THE AMUNDSEN SEA POLYNYA ARE SHAPED BY PHAEOCYSTIS ANTARCTICA BLOOMS. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28.
- 2012** Saille, S. F.; Ducklow, H.; Doney, S. C.; Moeller, H.: CARBON FLUXES AND PELAGIC ECOSYSTEM DYNAMICS AROUND TWO WESTERN ANTARCTIC PENINSULA ADELIE PENGUIN COLONY: AN INVERSE MODEL APPROACH. 2012 Ocean Sciences Meeting. Salt Lake City, Utah (The Oceanography Society, American Society of Limnology and Oceanography and American Geophysical Union).
- 2012** Price, L. M.; Steinberg, D. K.; Ducklow, H. W.: MICROZOOPLANKTON COMMUNITY STRUCTURE AND GRAZING IMPACT ALONG THE WESTERN ANTARCTIC PENINSULA. 2012 Ocean Sciences Meeting. Salt Lake City, Utah (The Oceanography Society, American Society of Limnology and Oceanography and American Geophysical Union).
- 2012** Brum, J. R.; Ducklow, H. W.; Sullivan, M. B.: MARINE VIRAL SURVIVAL SKILLS: HOW OCEANIC MICROBIAL VIRUSES SUCCEED IN THE SOUTHERN OCEAN. 2012 Ocean Sciences Meeting. Salt Lake City, Utah (The Oceanography Society, American Society of Limnology and Oceanography and American Geophysical Union).
- 2012** Saba, G. K.; Coleman, K.; Garzio, M. J.; Miles, T. N.; Jones, B. M.; Iglesias-Rodriguez, D.; Erickson, M.; Ducklow, H. W.; Schofield, O.: DIFFERENTIAL RESPONSE OF NATURAL PHYTOPLANKTON COMMUNITIES TO ENHANCED CARBON

- DIOXIDE (CO<sub>2</sub>) ALONG THE WESTERN ANTARCTIC PENINSULA. 2012 Ocean Sciences Meeting. Salt Lake City, Utah (The Oceanography Society, American Society of Limnology and Oceanography and American Geophysical Union).
- 2012** Huang, K.; Ducklow, H.; Bender, M. L.: SPATIAL AND INTER-ANNUAL VARIABILITY OF NCP AND GPP IN THE WESTERN ANTARCTIC PENINSULA REGION, 2008-2011. 2012 Ocean Sciences Meeting. Salt Lake City, Utah (The Oceanography Society, American Society of Limnology and Oceanography and American Geophysical Union).
- 2012** Gleiber, M. R.; Steinberg, D. K.; Ducklow, H. W.: TIME SERIES OF VERTICAL FLUX OF ZOOPLANKTON FECAL PELLETS ON THE CONTINENTAL SHELF OF THE WESTERN ANTARCTIC PENINSULA. 2012 Ocean Sciences Meeting. Salt Lake City, Utah (The Oceanography Society, American Society of Limnology and Oceanography and American Geophysical Union).
- 2011** Ducklow, H. W., Bernard, K., Erickson, M., Middaugh, N., Moran, X. A., Schofield, O., Steinberg, D., Vernet, M., and Sailley, S., PALMER LTER: WHY IS BACTERIAL PRODUCTION SUCH A LOW FRACTION OF PRIMARY PRODUCTION NEAR THE ANTARCTIC PENINSULA? ASLO 2011 Aquatic Sciences Meeting, San Juan PR 13-18 Feb. 2011.
- 2011** Erickson, M. J., and Ducklow, H. W., DISTRIBUTION AND ABUNDANCE OF MARINE MICROBIAL COMMUNITIES NEAR THE WESTERN ANTARCTIC PENINSULA. ASLO 2011 Aquatic Sciences Meeting, San Juan PR 13-18 Feb. 2011.
- 2010** Lunau, M; Erickson, M; Waldron, M; Ducklow, H W: SHIPBOARD, NEAR-REAL-TIME ENUMERATION OF LIVING PHYTOPLANKTON AND BACTERIA ALONG THE WEST ANTARCTIC PENINSULA. ASLO Summer Meeting, Santa Fe, NM. (Poster).
- 2010** Lunau, M; Erickson, M; Voss, M; Engel, A; Ducklow, H W: IMPACT OF UNBALANCED NITRATE INPUTS ON THE MICROBIAL TRANSFORMATION OF NITROGEN: A STABLE ISOTOPE AND SORTING FLOW CYTOMETRIC STUDY. ASLO Summer Meeting, Santa Fe, NM.
- 2010** BO44A-01 Will small do better? Temperature effects on autotrophic and heterotrophic picoplankton in the North Atlantic: X G Morán, ÁNGELLópez-Urrutia, WKLi, HDucklow, ACalvo-Díaz, LFranco-Vidal. Ocean Sciences Meeting, 2010, Portland OR
- 2010** IT43A-05 Bathymetric structuring of biological hotspots in the West Antarctic Peninsula (*Invited*): O Schofield, H Ducklow, M Arrott, A Kahl, D Martinson, DK Steinberg, B Fraser, K Gorman. Ocean Sciences Meeting, 2010, Portland OR
- 2010** IT41C-03 Long-term observations of climate change and ecosystem response along the western Antarctic Peninsula, 1975-2009. (*Invited*): H Ducklow, BFraser, DMartinson, OSchofield, S E Stammerjohn. Ocean Sciences Meeting, 2010, Portland OR
- 2010** CO31A-02 Investigating the decadal increase of primary production at Station ALOHA, Hawaii using data assimilative model: Y Luo, HDucklow, SCDoney, MAFriedrichs. Ocean Sciences Meeting, 2010, Portland OR
- 2010** BO31B-01 Cross-system comparison of zooplankton effects on transport of organic matter to the deep sea (*Invited*): D K Steinberg, SEWilson, MRGleiber, HDucklow, KBuesseler. Ocean Sciences Meeting, 2010, Portland OR

- 2010** BO15E-06 *POSTER* Abundance and single-cell activity of bacterial groups in Antarctic waters: T R Straza, H Ducklow, AE Murray, D Kirchman. Ocean Sciences Meeting, 2010, Portland OR
- 2010** K Huang, H Ducklow, M Vernet, M R Hiscock, N Cassar, M L Bender. BO13A-06 Export production and its regulating factors in the Western Antarctic Peninsula region of the Southern Ocean: Ocean Sciences Meeting, 2010, Portland OR
- 2008** Luo, Y., Woods Hole, MA, USA, Ducklow, H. W., Friedrichs, M. A. THE IMPORTANCE OF MICROBIAL DYNAMICS IN MARINE BIOGEOCHEMICAL MODELING: A TENTATIVE DATA ASSIMILATION STUDY OF OPEN OCEAN ECOSYSTEMS. AGU-ASLO Ocean Sciences Meeting, Orlando, FL
- 2007** K.M.S. Myers, M. Erickson, A.E. Murray, H.W. Ducklow. Effects of nutrient enrichments on bacterioplankton dynamics and community structure at Palmer Station, Antarctica –Tenth Symposium on Aquatic Microbial Ecology, Faro Portugal. Sept 2007.
- 2007** Luo, Yawei and HW Ducklow. "Importance of microbial processes in marine biogeochemical modeling: A tentative data assimilation on Open Ocean". Tenth Symposium on Aquatic Microbial Ecology, Faro Portugal. Sept 2007.
- 2005** McCallister, S. L. and H. Ducklow. Continental shelves as major sinks for atmospheric CO<sub>2</sub>. Abstracts ASLO Winter Meeting. Salt Lake City, p. 30.
- 2004** H. W. Ducklow, K. S. Baker, A. C. Clarke, W. R. Fraser, D. G. Martinson, L. B. Quetin, R. M. Ross, R. C. Smith, M. Vernet. "Long-Term Ecological Research on the Antarctic marine ecosystem: Climate migration, ecosystem response and teleconnections in an ice-dominated environment". Symposium on Antarctic Peninsula Climate Variability: History, Causes and Impacts 16-18 September, 2004 Cambridge UK. (Poster)
- 2004** Daniels, R. M., Ducklow, H. W., Richardson, T. L., Jackson, G. A., Roman, M. R., Fraser, W. R., Ross, R. M., Quetin, L. B. INVERSE MODEL ANALYSIS OF PLANKTON FOOD WEBS IN THE NORTH ATLANTIC AND WESTERN ANTARCTIC PENINSULA. Abstracts ASLO Winter Meeting. Honolulu, p.37.
- 2004** Oliver, J. L., Carlson, C. A., Ducklow, H. W., GROWTH ENHANCEMENT OF BACTERIA BY A NATURAL IRON CHELATOR, DESFERRIOXAMINE B (DFOB). Abstracts ASLO Winter Meeting. Honolulu, p.117.
- 2004** Richardson, T. L., Jackson, G. A., Roman, M. R., PLANKTONIC FOOD WEBS OF THE EQUATORIAL PACIFIC AT 140W: A SYNTHESIS OF EQPAC TIME SERIES CARBON FLUX DATA. Abstracts ASLO Winter Meeting. Honolulu, p.131.
- 2004** Rivkin, R. B., Hale, M. S., Li, W. K., Matthews, P. M., Agawin, N. S., Ducklow, H. W., Oliver, J. L., BACTERIAL RESPONSE TO MESOSCALE IRON ENRICHMENTS: SYNTHESIS OF FIELD STUDIES. Abstracts ASLO Winter Meeting. Honolulu, p.132.
- 2003** Morgan, JA, HL Quinby, DA Hansell and HW Ducklow. "Bacterial abundance and production in the Black Sea." Oral presentation at ASLO 2003 Aquatic Sciences Meeting, Salt Lake City Feb 8-14.
- 2003** Daniels, RM, HW Ducklow, TL Richardson, GA Jackson and MR Roman. "Plankton foodweb structure recovered from the JGOFS North Atlantic Bloom Experiment (May



- 1989) using an inverse technique.” Poster presented at ASLO 2003 Aquatic Sciences Meeting, Salt Lake City Feb 8-14.
- 2002** Oliver, J L, Barber, R T and Ducklow, H W. “The Heterotrophic Bacterial Response During the Mesoscale Southern Ocean Iron Experiment (SOFeX)” AGU Fall Meeting. San Francisco. Dec 2002.
- 2002** Church, M. J., E.F DeLong, C.M. Preston, H.W. Ducklow, and D.M. Karl. "Seasonal distributions of planktonic Archaea and Bacteria in the West Antarctic Peninsula" AGU-ASLO Ocean Sciences Meeting, Honolulu.
- 2002** McCallister, S. L., D. A Hansell and H.W. Ducklow. Distribution, Bacterial Utilization and Transport of Dissolved Organic Matter in the Far North Atlantic, May 2000. AGU-ASLO Ocean Sciences Meeting, Honolulu. Feb. 2002.
- 2001** McCallister, S. L., E.A. Canuel, J.E. Bauer, H.W. Ducklow. A Lipid Biomarker Approach to Assessing Differences in Sources and Reactivity of Estuarine Particulate and Dissolved Organic Matter. 2001 ERF Symposium, St Petersburg FL. November, 2001.
- 2001** McCallister, S, L, Canuel, E, A, Bauer, J, E, Ducklow, H, W. Fluctuations in organic matter composition along the estuarine gradient: A biomarker approach to understanding sources and reactivities of POM and DOM. ASLO Aquatic Sciences Mtg. Albuquerque, NM. February, 2001.
- 2000** Church, M. J. Dawn Castle, Laura Fandino, David Hutchins, Peter Sedwick, Tom Trull, Helen Quinby, and Hugh Ducklow. "Bacterioplankton ecology of the Subantarctic and Antarctic Polar Front regime" JGOFS Southern Ocean Symposium in Brest, France.
- 2000** Hollibaugh, J.T. N. Bano; and H.W. Ducklow. Comparison of beta-Proteobacteria ammonia oxidizer sequences from the Arctic and Southern Oceans. ASLO-2000. Copenhagen.
- 2000** McCallister, SL, Bauer, JE., and Ducklow, H.W. “Synergistic decomposition along an estuarine gradient: the impact of photochemistry on DOC, DON and DOP availability. ASLO 2000 Aquatic Sciences Meeting, Copenhagen, June.
- 2000** Ducklow, HW. Bacterial Component of Ocean Ecosystems: Global Synthesis. AGU-ASLO Ocean Science Meeting, 2000. San Antonio.
- 2000** T R Anderson, H W Ducklow. Steady-State Analysis of the Microbial Loop in Diverse Ocean Regions. AGU-ASLO Ocean Science Meeting, 2000. San Antonio.
- 1999** Ducklow, H. W., Smith, W. O., Fandino, L., Azam, F., Kirchman, D. L., Smith, D. C., Dickson, M. L., Carlson, C. A, Caron, D. A., Dennett, M., ALTERNATIVE SCENARIOS FOR BACTERIAL PRODUCTION IN THE ROSS SEA: CONVERSIONS AND CONSTRAINTS. Abstracts ASLO 1999 Aquatic Science Meeting, p. 60.
- 1999** Church, M. J., Ducklow, H. J., Hutchins, D. A., INVESTIGATION INTO BOTTOM-UP LIMITATION OF BACTERIAL GROWTH IN THE SOUTHERN OCEAN. Abstracts ASLO 1999 Aquatic Science Meeting, p. 40.
- 1999** Kirchman, D. L., Meon, B. L., Steward, G. F., Azam, F., Ducklow, H. W., COMPOSITION AND TURNOVER OF SELECTED DOM COMPONENTS IN THE SOUTHERN OCEAN. Abstracts ASLO 1999 Aquatic Science Meeting, p. 50.

- 1999** McCallister, L., Bauer, J., Ducklow, H. W., BIOAVAILABILITY OF DISSOLVED ORGANIC MATTER IN THE YORK RIVER ESTUARY: AN ENZYMATIC AND STOICHIOMETRIC STUDY. Abstracts ASLO 1999 Aquatic Science Meeting, p. 16.
- 1999** Schultz, Jr., G. E., Ducklow, H. E., CHANGES IN BACTERIOPLANKTON METABOLIC CAPABILITIES ALONG A SALINITY GRADIENT IN THE YORK RIVER, VA, ESTUARY. Abstracts ASLO 1999 Aquatic Science Meeting, p. 23.
- 1998** Schultz, GE and HW Ducklow. Bacterial dynamics and circulation in a small estuary: York River, VA. Abstracts 8<sup>th</sup> Int'l Symp. On Microbial Ecology. Halifax NS, p. 296.
- 1998** Garrison, DL, MM Gowing, ...H Ducklow....A Seasonal study of Foodweb Structure in the Northern Arabian Sea: A US JGOFS Study. AGU-ASLO Ocean Science Mtg. San Diego. EOS 79(1):67.
- 1998** Schultz, GE and HW Ducklow, Community Dynamics of Heterotrophic Bacteria in the York River Estuary, VA. AGU-ASLO Ocean Science Mtg. San Diego. EOS 79(1):64.
- 1998** Smith, WO, C A Carlson, H W Ducklow, D Hansell Large-Volume Experiments With Natural Assemblages of *Phaeocystis antarctica* From the Ross Sea. EOS 79(1):158.
- 1998** Ducklow, HW, H L Quinby, M Church, A L Sanford Bacterioplankton Response to the *Phaeocystis* Bloom in the Ross Sea Polynya: November 1994 - January 1996. EOS 79(1): 171
- 1998** Carlson, CA, N R Bates, D A Hansell, H W Ducklow The Use of Gas Tight Bags and Biogeochemical Properties (DOC and TCO~K2~L) to Estimate the Growth Efficiency of Bacterioplankton in the Ross Sea, Antarctica. EOS 79(1): 171.
- 1998** Riemann, L, L B Fandino, G F Steward, D C Smith, H W Ducklow, F Azam Variability of Bacterial Community Composition in the Arabian Sea During the 1995 JGOFS Program. EOS 79(1): 68.
- 1998** Hansell, D and HW Ducklow (session organizers). The Marine Carbon Biogeochemical Cycle: Regional and Global Perspectives From Canadian Northeast Pacific, U.S. JGOFS, and Related Programs Posters. EOS 79(1): 69,95.
- 1996** Carlson, CA, H W Ducklow, D A Hansell Assessing the Lability of the Dissolved Organic Carbon Pool in the Sargasso Sea and the Ross Sea.
- 1996** Smith, D.C., G. F. Steward, H. L. Quinby, H. W. Ducklow and F. Azam, "Bacterial abundance and production in the Arabian Sea during the 1995 US JGOFS Process cruises." American Geophysical Union, San Diego, February. (poster).
- 1995** Bryant, A. L. and H. W. Ducklow. The effect of mesocosm shape on bacteria: nanoplankton dynamics. Abstracts ASLO 1995 Meeting, Reno NV.
- 1991** Ducklow, H.W., Distribution and production of bacterioplankton in the NW Arabian Sea, International Symposium on the Oceanography of the Indian Ocean. National Institute of Oceanography, Goa, INDIA, January, 91. (not presented due to travel restrictions and the Gulf War).
- 1990** Quinby, H.L., H.W. Ducklow, E.R. Peele and K.A. Gloersen, <sup>3</sup>H-thymidine incorporation and bacterial production in Chesapeake Bay and the North Atlantic Ocean. EOS 71:109.
- 1990** Ducklow, H.W. H.L.Quinby, C.A.Carlson, H.G.Dam, and D.L.Kirchman, The bacterial component of the upper ocean carbon system during the spring bloom in the eastern North Atlantic ocean, . EOS 71:102.

- 1989** Fasham, M.J.R. and H.W. Ducklow, Simulation model of the seasonal cycle of plankton nutrients and dissolved organic matter in the North Atlantic Ocean. EOS 69:1113.
- 1989** Ducklow, H.W., E.R.Peele, D.A.Bronk, H.L.Quinby, J.H.Tuttle, and R.B.Jonas, Bacterioplankton response to stratification and role in oxygen depletion in mesohaline Chesapeake Bay, April-June, EOS 69: 1097.
- 1989** Ducklow, H.W., J.Martin, W.W.Broenkow, C.Garside and R.T.Williams, North Atlantic Spring Bloom (JGOFS 1989, leg 3): Recycling the bloom at 47 North. The Oceanography Society, Monterey CA (poster).
- 1989** Ducklow, H.W. and H.L. Quinby, Comparison of microbial foodweb dynamics in the mesohaline region and plume of Chesapeake Bay: seasonal cycles and carbon flow. ERF 10th Biennial International Estuarine Research Conference.
- 1989** Carr, M. C.A. Turley, H.W.Ducklow and H.L. Quinby, The international bacterial biomass determination intercalibration experiment: preliminary results and analysis. EOS 69:1087. (poster).
- 1988** Vezina, A.F., T.Platt and H.W.Ducklow, Inverse modelling of foodweb dynamics in the ocean: Primary production, trophodynamic interactions and vertical fluxes. AGU/ASLO Winter Meeting, San Francisco.
- 1988** Quinby, H., E.Peele, and H.Ducklow, "Bacterial biomass variability in Chesapeake Bay," AGU/ASLO Ocean Sciences Meeting, New Orleans, (poster).
- 1988** Peele, E.R. and H.W.Ducklow, "Flux of carbon through bacterioplankton in Chesapeake bay," AGU/ASLO Ocean Sciences Meeting, New Orleans.
- 1987** Hobbie, J.E. and H.W.Ducklow, "From the Great Lakes to the Great Salt Lake: Our changing concepts of microbial dynamics in Lakes and Oceans," Invited talk for Plenary Symposium on Coevolution of Limnology and Oceanography, 50th Summer ASLO Mtg, Madison, Wisc.
- 1987** Ducklow, H.W., Assessing the Role of bacteria in decomposing particulate matter over continental shelves, Workshop on the Impact of Ocean Boundaries on the Interior Ocean, NSTL, Mississippi.
- 1987** Ducklow, H.W., M.J.R.Fasham, and A.F.Vezina, "Modelling perspectives in bacterioplankton processes in the open sea," Third European Symposium on Marine Microbiology, Bangor, UK, Sept, 1987.
- 1986** Hill, S.M., H.W.Ducklow, T.C.Malone, W.M.Kemp, B.Wendler, J.H.Tuttle, and R.B.Jonas, "Bacterioplankton-phytoplankton couplings as a factor governing anoxia in Chesapeake Bay," Joint AGU/ASLO Mtg., New Orleans.
- 1986** Ducklow, H.W., "The relationship between thymidine incorporation and bacterial production," Ocean Sciences '86 Joint AGU/ASLO Mtg, New Orleans.
- 1986** Ducklow, H.W., "Large-scale approaches to the study of microbial processes in the ocean," 86th American Society of Microbiology Annual Meeting, Washington, D.C.
- 1986** Ducklow, H.W., M.R.Roman, and T.C.Malone, "Carbon and nitrogen exchanges among microbial populations of estuarine outflows: Covariability of autotrophs and heterotrophs," Fourth International Symposium on Microbial Ecology, Ljubljana, Yugoslavia.

- 1985** Ducklow, H.W. and T.C. Malone "Comparing heterotrophic and autotrophic picoplankton production in coastal waters," NATO Advanced Research Institute on Physiological Ecology of Photosynthetic Picoplankton in the Ocean, San Miniato, Italy.
- 1984** Purdie, D.A., Ducklow, H.W., P.J. Le B. Williams, and J.M. Davies, "The trophic role of planktonic bacteria studied in an enclosed microcosm at Loch Ewe Scotland. AGU-ASLO, New Orleans.
- 1984** Ducklow, H.W. and S. Hill, "The growth of bacteria in oceanic water masses." Ocean-Sciences '84 AGU-ASLO Meeting, New Orleans, LA.
- 1984** Ducklow, H.W. and S. Hill, "Bacterial biomass variability in warm core ring systems. AGU-ASLO, New Orleans
- 1984** Ducklow, H.W. and D.L. Kirchman, "Comparison of free-living and particle-attached bacteria in the New York Bight." ASLO Summer Meeting, Vancouver, B.C. (Invited paper given by DK).
- 1982** Nelson, D.M., H.W. Ducklow, and G.L. Hitchcock, "Distribution, development, and concentration of biomass at the center of Warm Core Gulf Stream Ring 82-B, April-June, 1982. AGU-ASLO Fall Meeting, San Francisco, CA. (Invited).
- 1982** Kirchman, D.L., H.W. Ducklow, and R. Mitchell, "A new method for estimating bacterial production in natural waters" Ocean Sciences 82: Joint AGU-ASLO Meeting, San Antonio, TX.
- 1982** Ducklow, H.W., "Development of a bacterial bloom at the center of Warm Core Ring 82-B" AGU-ASLO Fall Meeting, San Francisco.
- 1982** Ducklow, H.W. and D.L. Kirchman, "Abundance, production and vertical flux of bacteria associated with suspended and settling particles in the New York Bight" Ocean Sciences 82: Joint AGU-ASLO Meeting. San Antonio, TX.
- 1982** Ducklow, H.W. "Bacterial production and vertical flux over the continental shelf: Ecological evaluation of bacterial growth measurements. 82nd Annual Meeting, American Society of Microbiology, Atlanta, GA.
- 1981** Ducklow, H.W. "Bacterial biomass and production during a tidal destratification event in the York River estuary" 44th Annual Meeting, American Society of Limnology and Oceanography, Milwaukee, WI.
- 1981** Ducklow, H.W., D.L. Kirchman and G.T. Rowe. "The production and vertical flux of attached bacteria in the Hudson River plume studied with floating sediment traps" 44th Annual Meeting, American Society of Limnology and Oceanography, Milwaukee, WI.
- 1980** Ducklow, H.W. and R. Mitchell. "Experimental alteration of the bacterial flora of the freshwater pulmonate snail *Biomphalaria glabrata*" 43rd Annual Meeting, American Society of Limnology and Oceanography. Knoxville, TN.
- 1979** Ducklow, H.W. and R. Mitchell. "The role of bacteria in disease of the schistosome-bearing snail *B. glabrata*" 28th Annual Meeting, American Society of Tropical Medicine and Hygiene, Tucson, AZ.
- 1979** Ducklow, H.W., P.W. Mangel, and R. Mitchell. "The microflora of normal and compromised schistosome vector snails" 79th Annual Meeting, American Society for Microbiology, Los Angeles, CA.

- 1978** Ducklow, H.W., H.M. Tarraza, and R. Mitchell. "Pathogenicity of *Vibrio parahaemolyticus* toward the schistosome host snail *Biomphalaria glabrata*," 78th Annual Meeting, American Society for Microbiology, Las Vegas, NV.
- 1978** Ducklow, H.W., D.L. Kirchman, H.M. Tarraza, and R. Mitcehl. "Microbial population ecology of the schistosome host snail *B. glabrata* in Puerto Rico, 78th Annual Meeting, American Society for Microbiology, Las Vegas, NV.
- 1977** Ducklow, H.W. and R. Mitchell. "Microbial ecology of bacteria in mucus of living corals" 77th Annual Meeting, American Society for Microbiology, New Orleans, LA.
- 1976** Ducklow, H.W. and R. Mitchell. "The amino acid and sugar composition of coelenterate mucins in the Gulf of Eilat, Israel," 39th Annual Meeting, American Society for Limnology and Oceanography, Savannah, GA.