Amy S. Bower
Senior Scientist
Department of Physical Oceanography
Woods Hole Oceanographic Institution

Birth: November 12, 1959

Education:

Sea Semester, 1979, Sea Education Association, Woods Hole, MA
B.S., Tufts University, 1981 (Physics)
Ph.D., University of Rhode Island, 1988 (Oceanography)

Honors and Awards:

N. Hobbs Knight Scholarship Prize in Physics, Tufts University, 1981
Thomas J. Carroll Award for Employment 2003 Blind Employee of the Year in Massachusetts by the Carroll Center for the Blind and the Massachusetts Commission for the Blind

Positions Held:

University of Rhode Island Graduate School of Oceanography

- Graduate Research Assistant, 1981–1988
- Postdoctoral Research Associate, 1988

Woods Hole Oceanographic Institution Department of Physical Oceanography

- Postdoctoral Scholar, 1988–1989
- Postdoctoral Investigator, 1989–1990
- Assistant Scientist, 1990–1995
- Associate Scientist, 1995–1999
- Associate Scientist with Tenure, 1999–2005
- Senior Scientist, 2005–present

Sea Education Association

- Doherty Chair in Ocean Studies, March 2003–June 2004

Research Interests:

Mesoscale and Submesoscale Eddies, Overflows and Outflows, Western Boundary Currents

<u>Sea-going Experience 1989–present</u>:

- *RRS Charles Darwin*, Aug 1989: SYNOP East Gulf Stream moorings.
- *R/V Endeavor*, Jun 1990: DWBC–Gulf Stream Crossover. Hydrography, tracers and transport floats.
- *R/V Oceanus*, Jul 1991: SYNOP East Gulf Stream moorings.
- *R/V Le Suroit*, May 1992: Eastern Atlantic Med Water. SAMBA0 float test cruise.
- *R/V Oceanus*, Apr/May 1993: Med Undercurrent and Meddies (AMUSE). Hydrography, moorings and RAFOS floats (Chief scientist).
- *Kialoa II*, Jun/Jul 1993: AMUSE XBTs and RAFOS floats (Co-chief scientist).
- *Kialoa II*, Aug/Sep 1993: 3 AMUSE XBT and RAFOS float cruises (Chief scientist).
- *R/V Endeavor*, Oct 1994: DWBC Variability I. Sound source moorings (Chief scientist).
- *R/V Endeavor.* Nov 1994: DWBC Variability II. Hydrography, tracers, and RAFOS floats (Co-chief scientist).
- *R/V Oceanus*, May/Jun 1995: DWBC Variability III. Hydrography, tracers and RAFOS floats (Co-chief scientist).
- *R/V Knorr.* Feb/Mar 2001: Red Sea Outflow (REDSOX-I). Hydrography, moorings and RAFOS floats (Co-chief scientist).
- *R/V Maurice Ewing*, Aug/Sep 2001: REDSOX-II. Hydrography, moorings and RAFOS floats (Chief scientist).
- *R/V Oceanus*, Jul 2003: DWBC Pathways. Hydrography, moorings and RAFOS floats (Chief scientist).

Other Project Cruises (Sent or trained technicians to deploy instrumentation)

- *Kialoa II*, 1993–1994: 18 AMUSE cruises, XBTs and RAFOS floats
- *R/V Knorr*, 1996–1997: 3 WOCE Atlantic Circulation and Climate Experiment cruises, RAFOS floats
- *CSS Hudson, CSS Teleost, CCGS Cowley*, 2003–present: DWBC Pathways repeated RAFOS float deployments

<u>Other Professional Activities</u>:

Woods Hole Oceanographic Institution

- Physical Oceanography Department Seminar Coordinator, 1992
- WHOI Ethics Program Committee, 1992–1999
- WHOI Trustees Partnership Program, 1994–1997
- Physical Oceanography Department Recruitment Committee, 1995–2002
- WHOI Access to the Sea Strategic Planning Committee, 1996–1998
- WHOI Gender Equity Committee, 1999–2000
- WHOI Mary Sears Pioneer Woman in Oceanography Selection Committee, 2001
- WHOI Mentoring Task Force, 2001–2003
- Physical Oceanography Department Chair Search Committee, 2001

- WHOI Tenured Scientists Executive Committee, 2002–present (co-chaired institution survey on communication and distribution of internal funds; currently Vice-chair).
- WHOI Access to the Sea Task Force, 2004 (Co-chair of subcommittee on Ships and Ship Operations)
- WHOI Dean Search Committee, 2004–2005
- WHOI PO Chair Selection Committee, Chair, 2005–2006
- Ad Hoc Promotion Committee for various scientists in the Physical Oceanography Department

Outside Woods Hole Oceanographic Institution

- SYNOP Gulf Stream Workshops: University of Rhode Island, Oct 1989; San Francisco, CA, Dec 1990; WHOI, Sep 1991
- AGU Spring Meeting, Baltimore, MD, May 1989
- AGU Ocean Sciences Meeting, New Orleans, LA, Feb 1990
- Outflows and Overflows of the Atlantic Workshop, University of Lisbon, Portugal, Oct 1991
- AGU Ocean Sciences Meeting, New Orleans, LA, Jan 1992
- WOCE Core Project 3 Working Group, 1992–1995
- RAFOS Float Technology Workshop, Woods Hole, Jan 1994 (Coordinator).
- AGU Ocean Sciences Meeting, San Diego, CA, February 1994
- AGU Fall Meeting, San Francisco, CA, Dec 1996
- APROPOS Workshop (NSF-sponsored long-range planning meeting), Dec 1997
- AGU Ocean Sciences Meeting, San Diego, CA, Feb 1998
- European Geophysical Society General Assembly, Nice, France, Apr 1998
- WOCE Conference, Halifax, Nova Scotia, Canada, May 1998;
- Arabian Marginal Seas and Gulfs Workshop, Stennis Space Center, MS, May 1999
- AGU Spring Meeting, Boston, MA, Jun 1999
- Japan Sea Principal Investigator Meeting, Stennis Space Center, MS, Nov 1999
- European Geophysical Society General Assembly, Nice, France, Apr 2000.
- LAPCOD (Lagrangian Analysis and Prediction of Coastal and Oceanic Dynamics), Ischia, Italy, Oct 2000
- Invited Guest Scientist, IfM/Kiel, May 2001
- North Atlantic RAFOS Mini-Workshop, IfM/Kiel, Germany, May 2001 (Co-chair)
- AGU Ocean Sciences, Honolulu, HI, Feb 2002
- EGS-AGU-EUE Joint Assembly, Nice, France, Apr 2003
- MPOWIR (Mentoring Physical Oceanography Women to Increase Retention, www.mpowir.org), a national effort to improve the retention of women in physical oceanography. Steering committee member, June 2004-present.
- Gravity Current Climate Process Team Meeting, Providence, RI, Nov 2004 (invited)
- NSF “CAREER” Proposal Review Panel, Washington, DC, Nov 2004
- Member of the Corporation, Member of the Board of Trustees, Dean Search Committee, Sea Education Association, Woods Hole, 1997–present
- Member, American Geophysical Union, American Meteorological Society,

Oceanography Society, Sigma Xi

Refereed Publications:

Bower, Amy S., H. Thomas Rossby, and John L. Lillibridge, 1985. The Gulf Stream – barrier or blender? *Journal of Physical Oceanography*, **15**(1), 24–32.

Rossby, H. Thomas, Amy S. Bower, and Ping-Tung Shaw, 1985. Particle pathways in the Gulf Stream. *Bulletin of the American Meteorological Society*, **66**(9), 1106–1110.

Bower, Amy S., 1989. Potential vorticity balances and horizontal divergence along particle trajectories in Gulf Stream meanders east of Cape Hatteras. *Journal of Physical Oceanography*, **19**(11), 1669–1681.

Bower, Amy S., and H. Thomas Rossby, 1989. Evidence of cross-frontal exchange processes in the Gulf Stream based on isopycnal RAFOS float data. *Journal of Physical Oceanography*, **19**(9), 1177–1190.

Bower, Amy S., 1991. A simple kinematic mechanism for mixing fluid parcels across a meandering jet. *Journal of Physical Oceanography*, **21**(1), 173–180.

Bower, Amy S., and Nelson G. Hogg, 1992. Evidence for barotropic wave radiation from the Gulf Stream. *Journal of Physical Oceanography*, **22**(1), 42–61.

Bower, Amy S., and M. Susan Lozier, 1994. A closer look at particle exchange in the Gulf Stream. *Journal of Physical Oceanography*, **24**(6), 1399–1418.

Bower, Amy S., Laurence Armi, and Isabel Ambar, 1995. Direct evidence of meddy formation off the southwest coast of Portugal. *Deep-Sea Research I*, **42**, 1621–1630.

Bower, Amy S., and Nelson G. Hogg, 1996. Structure of the Gulf Stream and its recirculations at 55°W. *Journal of Physical Oceanography*, **26**(6), 1002–1022.

Lozier, M. Susan, Timothy J. Bold, and Amy S. Bower, 1996. The influence of propagating waves on cross-stream excursions. *Journal of Physical Oceanography*, **26**(9), 1915–1923.

Bower, Amy S., Laurence Armi, and Isabel Ambar, 1997. Lagrangian observations of meddy formation during A Mediterranean Undercurrent Seeding Experiment. *Journal of Physical Oceanography*, **27**(12), 2545–2575.

Ambar, Isabel, Laurence Armi, Amy S. Bower, and Teresa C. Ferreira, 1999. Some aspects of time variability of the Mediterranean Water off South Portugal. *Deep-Sea Research I*, **46**, 1109–1136.

Bower, Amy S., and Heather D. Hunt, 2000. Lagrangian observations of the Deep Western Boundary Current in the North Atlantic Ocean. Part I: Large-scale pathways and spreading rates. *Journal of Physical Oceanography*, **30**(5), 764–783.

Bower, Amy S., and Heather D. Hunt, 2000. Lagrangian observations of the Deep Western Boundary Current in the North Atlantic Ocean. Part II: The Gulf Stream–Deep Western Boundary Current crossover. *Journal of Physical Oceanography*, **30**(5), 784–804.

Bower, Amy S., Heather D. Hunt, and James F. Price, 2000. Character and dynamics of the Red Sea and Persian Gulf outflows. *Journal of Geophysical Research*, **105**(C3), 6387–6414.

LaCasce, J. H., and A. Bower, 2000. Relative dispersion in the subsurface North Atlantic. *Journal of Marine Research*, **58**(6), 863–894.

Richardson, Philip L., Amy S. Bower, and Walter Zenk, 2000. A census of meddies traced by floats. *Progress in Oceanography*, **45**(2), 209–250.

Bower, A. S., D. M. Fratantoni, W. E. Johns, and H. Peters, 2002. Gulf of Aden eddies and their impact on Red Sea Water. *Geophysical Research Letters*, **29**(21), 21-1–21-4.

Bower, A. S., B. Le Cann, T. Rossby, W. Zenk, J. Gould, K. Speer, P. L. Richardson, M. D. Prater, and H-M. Zhang, 2002. Directly measured mid-depth circulation in the northeastern North Atlantic Ocean. *Nature*, **419**, 603–607.

Bower, Amy S., Nuno Serra, and Isabel Ambar, 2002. Structure of the Mediterranean Undercurrent and Mediterranean Water spreading around the southwestern Iberian Peninsula. *Journal of Geophysical Research*, **107**(C10), 25-1–25-19.

Gordon, A. L., C. F. Giulivi, C. M. Lee, H. H. Furey, A. Bower, and L. Talley, 2002. Japan/East Sea intra-thermocline eddies. *Journal of Physical Oceanography*, **32**(6), 1960–1974.

Swift, Stephen A., and Amy S. Bower, 2003. Formation and circulation of dense water in the Persian/Arabian Gulf. *Journal of Geophysical Research*, **108**(C1), 3004, doi:10.1029/ 2002JC001360.

Bower, A. S., W. E. Johns, D. M. Fratantoni, and H. Peters, 2005. Equilibration and circulation of Red Sea Outflow Water in the western Gulf of Aden. *Journal of Physical Oceanography*, **35**, 1963–1985.

Furey, H., and A. Bower, 2005. Synoptic temperature structure of the East China and southeastern Japan/East Seas. *Deep-Sea Research II*, **52**,1421–1442.

Peters, H., W. E. Johns, A. Bower, and D. Fratantoni, 2005. Mixing and entrainment in the Red Sea Outflow Plume: I. Plume Structure. *Journal of Physical Oceanography*, **35**, 569–583.

Shoosmith, D. R., P. L. Richardson, A. S. Bower, and H. T. Rossby, 2005. Discrete eddies in the northern North Atlantic as observed by looping RAFOS floats. *Deep-Sea Research II*, **52**, 627–650.

Fratantoni, D. M., A. S. Bower, W. E. Johns, and H. Peters, 2006. Somali Current rings in the eastern Gulf of Aden. *Journal of Geophysical Research - Oceans*, in press.

Ph.D. Thesis:

Bower, Amy S., 1988. *Isopycnal Drifter Studies in the Gulf Stream.* Ph.D. Thesis, University of Rhode Island, 190 p.

Non-Refereed Publications:

Ambar, I., F. Sousa, T. Ferreira, L. Armi, and A. Bower, 1994. Variability of the Mediterranean Undercurrent off Southern Portugal, (extended abstract). *Second International Conference on Air-Sea Interaction and Meteorology and Oceanography of the Coastal Zone, September 22–27, 1994, Lisbon, Portugal.*

Bower, A. S., 1994. Meddies, eddies, floats and boats: How do Atlantic and Mediterranean Waters mix? *Oceanus*, **37**(1), 12–15.

Bower, A. S., L. Armi, and I. Ambar, 1996. Update on "A Mediterranean Undercurrent Seeding Experiment (AMUSE)." *International WOCE Newsletter*, **24**(4).

Bower, A. S., and H. D. Hunt, 1999. Kinematics and dynamics of the Deep Western Boundary Current where it crosses under the Gulf Stream. International *WOCE Newsletter*, **34**, 3-5.

Richardson, P. L., A. S. Bower, and W. Zenk, 1999. A census meddies tracked by floats. *International WOCE Newsletter*, **34**, 18–24.

Bower, A. S., P. L. Richardson, H. D. Hunt, T. Rossby, M. D. Prater, H.-M. Zhang, S. Anderson-Fontana, P. Perez-Brunius, and P. Lazarevich, 2000. Warm Water Pathways in the Subpolar Region: An overview of the ACCE RAFOS Float Program. *International WOCE Newsletter*, **38**, 14–16.

Rossby, T., M. D. Prater, H.-M. Zhang, S. Anderson-Fontana, P. Perez-Brunius, P. Lazarevich, A. S. Bower, P. L. Richardson, and H. D. Hunt, 2000. Warm Water Pathways in the Subpolar Region: Some Case Studies. *International WOCE Newsletter*, **38**, 17–19.

Technical Reports:

Bower, A. S., Editor. *RAFOS Float Technology Workshop Proceedings.* February, 1994, 115 pp.

Bower, A. S., J. Pallant, and C. L. Chandler, 1997. A Mediterranean Undercurrent Seeding Experiment (AMUSE): Part I: Program Description and Hydrographic Measurements. *Woods Hole Oceanographic Institution Technical Memorandum WHOI-01-97*, 14 pp.

Hunt, H. D., and A. S. Bower, 1998. Boundary Current Experiment I & II RAFOS Float Data Report 1994–1997. *Woods Hole Oceanographic Institution Technical Report WHOI-98-06*, 106 pp.

Hunt, H. D., C. M. Wooding, C. L. Chandler and A. S. Bower, 1998. A Mediterranean Undercurrent Seeding Experiment (AMUSE): Part II: RAFOS Float Data Report May 1993–March 1995. *Woods Hole Oceanographic Institution Technical Report WHOI-98-14*, 125 pp.

Alessi, C. A., H. D. Hunt, and A. S. Bower, 1999. Hydrographic data from the U.S. Naval Oceanographic Office: Persian Gulf, Southern Red Sea and Arabian Sea 19223-1996. *W.H.O.I. Technical Report WHOI-99-02*, 22pp. + appendices.

Furey, H., A. Bower, and P. Richardson, 2001. Warm Water Pathways and Intergyre Exchange in the Northeastern North Atlantic: ACCE RAFOS Float Data Report, November 1996–November 1999. *Woods Hole Oceanographic Institution Technical Report WHOI-01-17*, Woods Hole, MA, 153 pp.

Johns, W., H. Peters, R. Zantopp, A. Bower, and D. Fratantoni, 2001. CTD/O_2 Measurements Collected Aboard the R/V KNORR, February–March 2001: REDSOX-1. *University of Miami RSMAS Technical Report 2001-01, June 2001*, University of Miami, FL, 455 pp.

Furey, H., A. Bower, and D. Fratantoni, 2004. Red Sea Outflow Experiment (REDSOX): DLD2 RAFOS Float Data Report, February 2001–March 2003. *Woods Hole Oceanographic Institution Technical Report 2005-01*. Woods Hole, MA, 133 pp.

<u>Seminars and Lectures: 1988–present:</u>

"Potential Vorticity Balances and Horizontal Divergence along RAFOS Float Trajectories in the Gulf Stream:"
- University of Miami, Nov 1988
- Florida State University, Nov 1988
- AGU Spring Meeting, Baltimore, MD, May 1989

"A Simple Kinematic Mechanism for Mixing Fluid Parcels across the Gulf Stream:"
- Department of Physical Oceanography, WHOI, Nov 1990

"Evidence for Barotropic Wave Radiation from the Gulf Stream Based on Historical Current Meter Data:"
- AGU Ocean Sciences Meeting, New Orleans, LA, Feb 1990
- Massachusetts Institute of Technology, Feb 1990
- University of Rhode Island, Mar 1990
- Florida State University, Apr 1990
- Department of Physical Oceanography, WHOI, June 1990.

"A Mediterranean Undercurrent Seeding Experiment, A Program to Study the Formation of Mediterranean Salt Lenses:"
- Buoy Lunch seminar WHOI, Nov 1991
- University of Washington, May 1993

"Particle Motion in the Gulf Stream:"
- University of Washington, Nov 1991
- University of Hawaii, Nov 1991

- University of Toronto, Canada, Oct 1992

"Energetics of the Gulf Stream at 55W:"

- AGU Ocean Sciences Meeting, New Orleans, LA, Jan 1992

"Potential Vorticity Variability in the Gulf Stream:"

- Harvard University, Apr 1992
- Department of Physical Oceanography, WHOI, May 1992

"Do RAFOS Floats Really Cross the Gulf Stream:"

- Massachusetts Institute of Technology, Oct 1992

"A Closer Look at Particle Exchange in the Gulf Stream:"

- New England Physical Oceanography Seminar Series, WHOI, Mar 1993
- University of Washington, May 1993

"AMUSE Update I: Science under Sail:"

- Buoy Lunch WHOI, Nov 1993

"AMUSE Update II: RAFOS Float Performance:"

- Buoy Lunch WHOI, Nov 1993

"AMUSE: A Mediterranean Undercurrent Seeding Experiment:"

- University of Rhode Island, Feb 1994

"AMUSE: Part Two - Preliminary Results from Seeding Experiment:"

- AGU Ocean Sciences Meeting, San Diego, CA, Feb 1994

"The State of the Gulf Stream at 55W:"

- Department of Physical Oceanography, WHOI, Aug 1994

"Lagrangian Observations of Meddy Formation and Mediterranean Water Spreading Patterns:"

- IAPSO Meeting, Honolulu, Hawaii, Aug 1995
- Information and Communications Departments, WHOI, Oct 1995
- New England Physical Oceanography Seminar Series, Massachusetts Institute of Technology, Jan 1995
- Department of Physical Oceanography, WHOI, Sep 1995
- Florida State University, Jan 1996
- University of Miami, Jan 1996
- AGU Fall Meeting, San Francisco, CA, Dec 1996
- University of Rhode Island, Jun 1997

"The Red Sea and Persian Gulf Outflows:"

- AGU Fall Meeting, San Francisco, CA, Dec 1996
- Department of Physical Oceanography, WHOI, Jul 1997
- University of Washington, Jul 1997

"The Pathways and Kinematics of Meddies in the Iberian Basin:"

- European Geophysical Society General Assembly, Nice, France (invited), Apr 1998

"The Gulf Stream –Deep Western Boundary Current Crossover: Results from Float Observations:"

- AGU Ocean Sciences Meeting, San Diego, CA, Feb 1998
- European Geophysical Society General Assembly, Nice, France, Apr 1998
- WOCE Conference, Halifax, Nova Scotia, Canada, May 1998
- Department of Physical Oceanography, WHOI, Nov 1998

"Dynamics of the Red Sea and Persian Gulf outflows:"

- University of Rhode Island, Apr 1999
- Florida State University, May 1999

"The Red Sea Outflow: Modeling Results and a Proposed Field Program:"

- WHOI Buoy Lunch Seminar, Apr 1999

"The Red Sea and Persian Gulf Outflows:"

- Arabian Marginal Seas and Gulfs Workshop, U.S. NRL, Stennis Space Center, May 1999

"Lagrangian Observations of the DWBC in the North Atlantic:"

- University of Miami, May 1999

"Warm Water Pathways in the Northeastern North Atlantic:"

- AGU Spring Meeting, Boston, MA, Jun 1999

"Direct Observations of Warm Water Pathways in the Northern North Atlantic:"

- European Geophysical Society Meeting, Nice, France, Apr 2000

"Mixing and Dynamics of the Red Sea and Persian Gulf Outflows:"

- European Geophysical Society Meeting, Nice, France, Apr 2000

"Spreading of Mediterranean Water around the Iberian Peninsula:"

- LAPCOD (Lagrangian Analysis and Prediction of Coastal and Oceanic Dynamics) Meeting, Ischia, Italy, Oct 2000
- "Red Sea Outflow Experiment (REDSOX)"
- Brown Bag Administrative Seminar, WHOI, Jan 2001

"Preliminary Results from the Red Sea Outflow Experiment (REDSOX):"

- IfM/Kiel, Germany, May 2001

"REDSOX Cruise Report:"

- WHOI Buoy Lunch Seminar, May 2001.

"From Inspiration to Observation: The ABCs of Conducting Research at Sea:"

- WHOI Summer Student Lecture Series, Jul 2001

"Red Sea Outflow Experiment (REDSOX): New, Deep-reaching, Energetic Eddies in the Gulf of Aden and Their Impact on Red Sea Water Spreading:"

- AGU Ocean Sciences, Honolulu, HI, Feb 2002

"On the Mid-Depth Circulation in the Northeastern North Atlantic:"

- EGS-AGU-EUE Joint Assembly, Nice, France, Apr 2003 (invited)

"Red Sea Outflow Experiment (REDSOX): Descent and initial spreading of Red Sea Water in the northwestern Indian Ocean:"

- EGS-AGU-EUE Joint Assembly, Nice, France, Apr 2003

"Direct Observations of Red Sea Water Spreading in the Northwestern Indian Ocean From Floats:"

- AGU Ocean Sciences Meeting, Portland, Oregon, Feb 2004

"Equilibration of Red Sea Outflow Water"

- Gravity Current Climate Process Team Meeting, Providence, RI, Nov 2004

Instrument Development:

Collaborated with J. Valdes (WHOI) to redesign isopycnal floats for the DWBC, 1994 (first use at WHOI).

Collaborated with J. Valdes (WHOI) to modify the "float park" technique (originally developed by W. Zenk) for REDSOX, 2000 (first use at WHOI)

Educational and Outreach Activities:

Woods Hole Oceanographic Institution

- MIT/WHOI Joint Program, Biology Mega-course, Physical Oceanography lectures: Jan 1991, Feb 1992, Feb 1993
- Summer Student Fellow Lecture Series, Jul 1992, Jul 1995, Jul 1999, Jul 2001, Jun 2003
- MIT Undergraduate Independent Activities Program (IAP) Course in Oceanography (with J. Marshall): Jan 1993, Jan 1994
- Speaker, WHOI Associates Day of Science, Sep 1996
- Students advised:
    - Deborah Slater Shoosmith, SOC Guest Ph.D. student, Sep–Dec 2000 (co-advisor)
    - Shinichiro Kida, WHOI/MIT Joint Program Ph.D. student, 2003–2006 (thesis committee member)

Outside Woods Hole Oceanographic Institution

- Guest, "Women in Science," Massachusetts Corporation for Educational Telecommunications live broadcast, Dec 1993
- Guest lecturer, Sea Education Association, Feb 1995
- Featured in educational video for the SETQuest project, a series of videos and interactive laser disks on careers in science, engineering and technology, Oct 1995
- Guest speaker, Woods Hole Children's School of Science, Summer 1996
- Guest speaker, Mashpee Middle School, Mashpee MA, 100 students, Apr 1997
- Guest speaker, Morse Pond School, Falmouth, MA, 800 students, Apr 1997
- Guest speaker, Latin School of Chicago, 250 students, Jan 1998
- Guest lecturer, Sea Education Association, Jul 1999
- Guest speaker on physical oceanography and use of adaptive equipment, Lowell Lecture Series, Boston Museum of Science, Jan 2003
- Commencement speaker, "Sea Lab," New Bedford Public Schools, MA, Aug 2003
- Guest speaker on physical oceanography, Latin School of Chicago, 700 middle and high school students, Mar 2004
- Guest speaker on physical oceanography, Morse Pond School, 45 students, Apr 2004
- WHOI Instrumentation website – RAFOS Floats: Contributor of main content, 2004
- Profiled on "Remarkable Careers in Oceanography: Women Exploring the Oceans" web site (http://www.womenoceanographers.org), 2005 (in preparation).
- Guest speaker on careers in science, Jo Taylor Leadership Institute, American Foundation for the Blind, Boston, Massachusetts, Mar 2005
- Students advised:
    - Deborah Slater Shoosmith, Guest Ph.D. student from Southampton Oceanography Center, Fall 2000
    - Shinichiro Kida, Ph.D. student, WHOI/MIT Joint Program, Thesis committee member, 2003–2006

- Fengchao Yao, Division of Meteorology and Physical Oceanography Ph.D. student, RSMAS, University of Miami, thesis committee member, 2004–present.

- Bower, A., E. Zettler and G. Gawarkiewicz, 2004. Science Under Sail: Ocean Science Education Program Combines Traditional Vessels with State-of-the-Art Technology. *Oceanography*, **17**, 42–51. (refereed publication of The Oceanography Society)

Supervision:

- Heather Hunt Furey, Research Associate
- Paula Perez-Brunius, Research Associate
- Carol Alessi, Information Systems Associate (shared)
- Rochelle Ugstad Reardon , Research Assistant
- George Tupper, Research Associate (shared)
- James Valdes, Senior Engineer (shared)
- Christine Wooding, Research Associate (shared)