

Dr. Amy Bower: Publications

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Etter, R.J., and A.S. Bower. Dispersal and population connectivity in the deep North Atlantic estimated from physical transport processes. *Deep-Sea Research I*, submitted.

Speer, K., A.S. Bower, P. Hamilton, C. Hancock, E. Simons, and N. Wienders. Subsurface ocean transport from Deepwater Horizon to De Soto Canyon in the northern Gulf of Mexico. *Proceedings of the National Academy of Science*, submitted.

Papadopoulos, V.P., S.S. Sofianos, D.E. Raitsos, A. Bower, P. Zhan, M. Qurban, Y. Abualnaja, H. Kontoyiannis, A. Pavlidou, N. Zarokanellos, and I. Hoteit. On the deep ventilation of the Red Sea. *Journal of Climate*, submitted.

Zhai, P., L. Pratt, and A.S. Bower. On the crossover of boundary currents in an idealized model of the Red Sea. *Journal of Physical Oceanography*, submitted.

Rykova, T., F. Straneo, and A.S. Bower. Seasonal and interannual variability of the West Greenland Current system in the Labrador Sea in 1993-2008. *Journal of Geophysical Research*, accepted.



Green, R., A.S. Bower, and A. Lugo-Fernandez, 2014. First autonomous bio-optical profiling float in the Gulf of Mexico reveals dynamic biogeochemistry in deep waters. *PLOS ONE* 9 (7):e101658. [Dataset](#) [Supporting Information](#)

Bower, A.S. and J.T. Farrar, 2015. *Chapter 19: Air-Sea Interaction and Horizontal Circulation in the Red Sea*. In: The Red Sea. The Formation, Morphology, and Environment of a Young Ocean Basin. N. Rasul and I. Stuart (eds.) Springer Publishing, Germany, submitted.



Chen, C., L. Ruixiang, L. Pratt, R. Limeburner, R. Beardsley, A. S. Bower, H. Jiang, Y. Abualnaja, X. Liu, Q. Xu, H. Lin, J. Lan, T.-W. Kim, 2014. Process modeling studies of physical mechanisms of the formation of an anticyclonic eddy in the central Red Sea. *Journal of Geophysical Research - Oceans*, 119(2), 1445-1464.



Yao, F., Ibrahim Hoteit, L. J. Pratt, A. S. Bower, A. Köhl, G. Gopalakrishnan, 2014. Seasonal overturning circulation in the Red Sea. Part 1. Model validation and summer circulation. *Journal of Geophysical Research*, 119(4), 2238-2262.



Yao, F., I. Hoteit, L. J. Pratt, A. S. Bower, P. Zhai, A. Köhl, G. Gopalakrishnan and D. Rivas, 2014. Seasonal overturning circulation in the Red Sea. Part 2. Winter Circulation. *Journal of Geophysical Research*, 119(4), 2263-2289.

Churchill, J., A. S. Bower, D. C. McCorkle, and Y. Abualnaja. The transport of nutrient-rich Indian Ocean water through the Red Sea and into coastal reef systems. *Journal of Marine Research*, submitted.



deJong, M.F., A.S. Bower, and H.H. Furey, 2014. Two years of observations of warm core anticyclones in the Labrador Sea and their seasonal cycle in heat and salt stratification. *Journal of Physical Oceanography*, 44, 427-444, doi:10.1175/jpo-d-13-070.1.



Furey, H. H, M. F. de Jong, J. R. Valdes and A. S. Bower, 2013. Eddy seeding in the Labrador Sea: A Submerged Autonomous Launch Platform application. *Journal of Atmospheric and Oceanic Technology*, 30, 2611-2629, doi:10.1175/JTECH-D-13-00069.1.



Imawaki, S., A. S. Bower, L. Beal, and B. Qiu, 2013. *Western Boundary Currents* In: Ocean Circulation and Climate - A 21st Century Perspective, 2nd Edition, Gerold Siedler, Stephen M. Griffies, W. John Gould and John Church (eds.); Academic Press, 2013.



Zhai, P., and A. Bower, 2013. The response of the Red Sea to a strong wind jet near the Tokar Gap in summer. *Journal of Geophysical Research*, 118(1), 422-434, doi: 10.1029/2012JC008444.



Bower, A. S., R. M. Hendry, D. E. Amrhein, and J. M. Lilly, 2013. Direct observations of formation and propagation of subpolar eddies into the Subtropical North Atlantic. *Deep-Sea Research II*, 85, 15-41, doi:10.1016/j.dsr2.2012.07.029.



Papadopoulos, V. P., Y. Abualnaja, S. A. Josey, A. Bower, D. E. Raitsos, H. Kontoyiannis, and I. Hoteit, 2013. Atmospheric forcing of the winter air-sea heat fluxes over the northern Red Sea. *Journal of Climate*, 26, 1685-1701, doi:10.1175/JCLI-D-12-00267.1.



Lozier, M. S., S. F. Gary, and A. S. Bower, 2012. Simulated pathways of the overflow waters in the North Atlantic: Subpolar to subtropical export. *Deep-Sea Research II*, doi:10.1016/j.dsr2.2012.07.037.



Swift, S. A., A. S. Bower, and R. W. Schmitt, 2012. Vertical, horizontal, and temporal changes in temperature in the Atlantis II and Discovery hot brine pools, Red Sea. *Deep-Sea Research I*, 64, 118-128, doi:10.1016/j.dsr.2012.02.006.



Bower, A. S., and H. H. Furey, 2011. Mesoscale eddies in the Gulf of Aden and their impact on the spreading of Red Sea outflow water. *Progress in Oceanography*, 96, 14-39, doi:10.1016/j.pocean.2011.09.003.



Bower, A. S., S. Lozier, and S. Gary, 2011. Export of Labrador Sea Water from the subpolar North Atlantic: A Lagrangian perspective. *Deep-Sea Research II*, 58(17-18), 1798-1818, doi:10.1016/j.dsr2.2010.10.060.



Bower, A. S., M. S. Lozier, S. F. Gary, and C. W. Böning, 2009. Interior pathways of the North Atlantic meridional overturning circulation. *Nature*, 459(14), 243-248, doi:10.1038/nature07979.



Bower, A. S., and W.-J. von Appen, 2008. Interannual variability in the pathways of the North Atlantic current over the Mid-Atlantic Ridge and the impact of topography. *Journal of Physical Oceanography*, 38(1), 104-120, doi:10.1175/2007JPO3686.1.



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*, 111, C09039, doi:10.1029/2005JC003338.



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, doi:10.1016/j.dsr2.2004.12.011.



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



Furey, H. H., and A. S. Bower, 2005. Synoptic temperature structure of the East China and southeastern Japan/East Seas. *Deep-Sea Research II*, 52, 1421-1442, doi:10.1016/j.dsr2.2003.07.022.



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.



Swift, S. A., and A. 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.



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



Bower, A. S., N. Serra, and I. Ambar, 2002. Structure of the Mediterranean undercurrent and Mediterranean water spreading around the southwestern Iberian Peninsula. *Journal of Geophysical Research*, 107(C10), 3161, doi:10.1029/2001JC001007.



Bower, A. S., B. Le Cann, T. Rossby, W. Zenk, J. Gould, K. Speer, P. 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, 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), 2025, doi:10.1029/2002GL015342.



Richardson, P. L., A. S. Bower, and W. Zenk, 2000. A census of Meddies tracked by floats. *Progress in Oceanography*, 45, 209-250.

LaCasce, J. H., and A. Bower, 2000. Relative dispersion in the subsurface North Atlantic.



Journal of Marine Research, 58(6), 863-894.



Bower, A. S., H. D. Hunt, and J. F. Price, 2000. Character and dynamics of the Red Sea and Persian Gulf outflows. *Journal of Geophysical Research*, 105(C3), 6387-6414.



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Bower, A. S., H. D. Hunt, and J. F. Price, 2000. Character and dynamics of the Red Sea and Persian Gulf outflows. *Journal of Geophysical Research*, 105(C3), 6387-6414.



Bower, A. S., and H. D. Hunt, 2000a. 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, A. S., and H. D. Hunt, 2000b. 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.



Ambar, I., L. Armi, A. Bower, and T. Ferreira, 1999. Some aspects of time variability of the Mediterranean Water off south Portugal. *Deep-Sea Research I*, 46, 1109-1136.



Bower, A. S., L. Armi, and I. Ambar, 1997. Lagrangian Observations of meddy formation during a Mediterranean undercurrent seeding experiment. *Journal of Physical Oceanography*, 27, 2545-2575.



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



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



Bower, A. S., L. Armi, and I. Ambar, 1995. Direct evidence of meddy formation off the southwestern coast of Portugal. *Deep-Sea Research I*, 42(9), 1621-1630.



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



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



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



Bower, A. 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, A. S., and T. 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.



Rossby, T., A. S. Bower, and P.-T. Shaw, 1985. Particle pathways in the Gulf Stream. *Bulletin of the American Meteorological Society*, 66(9), 1106-1110.



Bower, A. S., H. T. Rossby, and J. L. Lillibridge, 1985. The Gulf Stream---Barrier or Blender? *Journal of Physical Oceanography*, 15(1), 24-32.

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