

DAVID WILLIAM MURRAY
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Education

- B.S. 1978 Geology (Honors), University of Rhode Island, Sr. Thesis: Synoptic conditions before and after dune scarp erosion at Charlestown Beach, R.I. (Advisor: J. Boothroyd)
- M.S. 1982 Oceanography (geological), Oregon State University, Thesis: Paleo-oceanography of the Gulf of California based on silicoflagellates from marine varved sediments (Advisor: Hans Schrader)
- Ph.D. 1987 Oceanography (geological), Oregon State University, Thesis: Spatial and temporal variations in sediment accumulation in the central tropical Pacific (Advisor: G. Ross Heath)

Research Interests

Biogeochemical Cycles in Rivers, Estuaries, and the Oceans; Stable Isotope Geochemistry; Late Cenozoic Paleoceanography; Marine Record of ENSO and Other High Frequency Climatic Events; Chemicals Linked to Environmental Contamination and Innovative Analytical Techniques

Professional Training and Academic Career

- Lecturer, Department of Earth, Environmental and Planetary Sciences, Brown University, July 2015-present.
- Senior Research Associate and Facilities Manager in Environmental and Geological/Earth Sciences, Center for Environmental Studies/Dept. of Geological Sciences/Dept. of Earth, Environmental & Planetary Sciences, Brown University, July 2010 – present
- Adjunct Assistant Professor/Lecturer, Center for Environmental Studies/Institute at Brown for Environment & Society, Brown University, Sept. 2011 – June 2015.
- Environmental Science Curricular and Technical Manager, Center for Environmental Studies, Brown University, Sept. 1998 – June 2010
- Director, Analytical Core-Chemistry, Brown University Superfund Research Program, Brown University, April 2005-March 2014
- Post-doctoral Research Associate/Senior Research Associate, Department of Geological Sciences, Brown University, Oct. 1986-Sept 1998 and April 2000-June 2010
- Research Scientist, College of Ocean and Atmospheric Sciences, Oregon State University, May to July 1998 and Sept. 1999
- Lecturer, Department of Earth Sciences, Boston University, Fall'97, Spring'98

Classes

- GEOL/CHEM 1660- Instrumental Analysis with Environmental Applications, co-taught with W. Suggs, K. Hess, M. Zimmt (Chem) and Y. Huang (DEEPS). Spring 2012, 2013, 2014, 2015, 2016.
- Guest Lecturer, CHEM 0008E-Exploration of the Chemistry of Renewable Energy (K. Hess, Instructor), Fall 2016 and 2017.
- Guest Lecturer and day in field, Save the Bay Course for STEM II program through summer@Brown, Marine Life in the Balance: Protecting a Changing Estuary Ecosystem, (J Kelly, Instructor), Summer 2016, 2017, 2018, 2019.

DEEPS Senior Thesis Advisees (since 2015)

Daniel Gates (2020), Maura Curry (2019), Sophia Hibben (2019), Michael Demanche (2017, w/W. Prell), Adele Anderson (2017, w/Warren Prell), Sofia Rudin (2017, w/Tim Whitfeld), Jasmine McAdams (2016, w/W. Prell), Erica Thieleman (2015, w/W. Prell).

Awards and Honors

Who Saves the Bay- Profiled on Save the Bay web site:
<http://www.savebay.org/NetCommunity/Page.aspx?pid=382>
Save the Bay Environmental Achievement Award, 2010.

Professional Service

Member, American Geophysical Union
Member, Estuarine Research Federation
GoMRI V Email Review April 2015 and Panel Member July 2015
GoMRI VI Panel Member July 2017
NSF Panel Member, Global Biogeochemical Cycles, June 2001, Earth System History, March 2003, January 2004
ODP Janus User Group member, 1995-1996, Advisory committee for chemical data portion of Janus project (Networked database)

Community Projects And Committees

Brown Laboratory Safety Committee, 2001-present.
Rhode Island Environmental Monitoring Collaborative, 2013-present
Save the Bay's Program & Policy Committee, 2019-present
Member Narragansett Terrace Yacht Club junior sailing instructor, treasurer and currently Vice-Commodore, 2003-present
Brown Environmental Leadership Lab (BELL) Advisory Council, 2014-present
Save the Bay's Project Narragansett Instructor, Summer 2003-2015
Brown Leadership Institute Advisory Board, 2005-2012
Assistant Coach and Coach AYSO Fall soccer , 2003-2011
Brown Env. Leadership Lab (BELL) instructor on Narragansett Bay and environmental conditions, 2002-2007
East Providence Harbor Commission (member and chair), Feb'00 to Feb'07
IAQ Tools for Schools, Waddington Elementary School (chair), April'02-June'05
Brown University Staff Advisory Committee , July'00 to Dec.'02

Recent Projects and Grants

NE Interstate Water Pollution Control Commission, "Sabin Point Park Stormwater Improvement", Grant to City of East Providence, collaboration with Brown and Save the Bay, \$100,000. 3/17-10/18. Role: Pre- and post stormwater improvement sampling and analysis of nitrogen and phosphorus loads.
NE Interstate Water Pollution Control Commission, "Update and integration of the 2014 and 2015 data into the Spatial Survey data set and generation of decade-long (2005-2015) trends of DO and Chlorophyll distribution in mid and upper Narragansett Bay for the NBEP Status and Trends Report", \$33,257, W. Prell and D. Murray PI's, 10/26/15-9/15/16. Role: Help compile, organize, and evaluate data and write report.
RI Science & Technology Advisory Council (STAC)/RI Research Alliance, "Diatom community composition as an indicator of coastal ecosystem change", PI: R Robinson (URI), \$29,162 subcontract to Brown (W. Prell and D. Murray PI's), 5/1/15-4/30/16. Role: coordinate core analysis for chemistry and diatom composition, supervise student workers, and prepare report of results with W. Prell.

RI Natural History Survey, “The Spatial Extent of Hypoxia in Narragansett Bay, Phase 1: A proposal to compile, organize, and document the spatial survey (Insomniacs/Day Trippers) water column data for temperature, salinity, density, and dissolved oxygen and to characterize station variability from 2005 to 2013”, \$29,995, 12/1/13 to 6/30/14, PI: Warren Prell. Role: Help compile, organize, and evaluate data.

Core Infrastructure Award/Brown Provost’s Office, “Olympus Handheld XRay Fluorescence Spectrometer- Delta Professional Model; GeoTek Software and mounting bracket to attach Delta to core scanning track”, \$47,266, 2014, PI’s: T. Herbert and J. Russell. Role: Purchase equipment and incorporate it into Env. Chem. Facility.

NOAA/CHRP/URI, NA11NOS4780043, “Observations and modeling of Narragansett Bay Hypoxia and its response to Nutrient Management”, \$37,198 (Brown), 9/1/11-8/31/14, PI: D. Codiga (URI). The objective of this collaborative project is to study hypoxia in Narragansett Bay through a combination of observations and modeling. Subcontract to Brown (W. Prell, PI). Role: coordinate summertime dissolved oxygen and water column properties and provide the data to collaborators.

NIH P42 ES013660, “Reuse in Rhode Island: A State-Based Approach to Complex Exposures”, Core C: 4/18/05-3/31/14, PI: K. Boekelheide, Brown’s Superfund Basic Research Program grant to study exposures and remediation of complex mixtures of toxic chemicals, Role: Director of the Analytical Core-Chemistry (Core C), <http://www.brown.edu/Research/SBRP/> - Renewed for 5 years to 3/31/14, Yearly budget: ~75 K in direct funds.

NOAA/RI SeaGrant, “A multi-proxy reconstruction of anthropogenic-induced productivity and spatial coupling in Narragansett Bay”, \$199,134, 2/1/10-1/31/13, CoI w/PI: W. Prell, The objective is to use chemical measurements and microfossils in core material to reconstruct spatial gradients of productivity and benthic response in Narragansett Bay over the past 500 years. Role: Coordinate and supervise chemical analyses and write up results.

Provost’s Equipment Fund/Brown Provost’s Office, “Milestone Ultrawave Microwave Digestion System”, \$68,000, 2012, PI: D. Murray. Role: Purchase equipment and incorporate it into Env. Chem. Facility.

Sheridan-Teagle Fellows Grant, “A Multidisciplinary Course in Analytical Chemistry /Instrumental Analysis”, \$15,000, 7/1/11-6/30/12, J.W. Suggs, Y. Huang, D. Murray, Collaborative project to develop and teach a class on instrumental analysis and participate in Brown-Dartmouth Teagle foundation project. GEOL/CHEM 1660 course offered Spring 2012.

NCCR, NIH, “Fate of mercury contaminants in Narragansett Bay, Rhode Island”, \$201,910 (Brown), 5/1/09-4/30/12, PI’s: D. Taylor (RWU) and W. Prell (Brown), Collaborative Project to study mercury cycling in the Narragansett Bay ecosystem and substrate. Role: Coordinate and supervise sample processing, analysis, and data compilation. Part of the Rhode Island IDeA Network of Biomedical Research Excellence (INBRE) Project, P20RR016457 from NCCR, NIH, PI: Z. Shaikh (URI).

NOAA/URI, NA05NMF4721253, NOAA Bay Windows Project, 2005-present, PI: C. Deacutis (NBEP), Funds for spatial survey monitoring of dissolved oxygen in Narragansett Bay. Role: Coordinate and/or perform the tasks needed to process and display the survey data.

NOAA/URI, URI-020606/0000848, “Modeling Tools to Predict Hypoxia/Anoxia in Upper Narragansett Bay”, \$385,033 (Brown), 8/1/05-7/31/11- renewal submitted and conditional approval for funding, PI: C. Oviatt. This project is to study the interactions between nutrient loads, physical processes, and biological processes that are attributed to the development of summertime hypoxia in Upper Narragansett

Bay and to develop predictive models of these conditions. Role: Coordinate the spatial surveys and supervise data synthesis,

<http://www.geo.brown.edu/georesearch/insomniacs/index.html>

EPA/ New England Interstate Water Pollution Control Commission. D. Murray, Consultant. \$4,000. Compiled and analyzed surface sediment chemical and physical property data from Narragansett Bay and the Providence and Seekonk Rivers as part of a New England pilot project exploring the development of a biological condition gradient applicable to estuarine systems. Narragansett Bay Estuary Program Report, NBEP-07-127.

EPA/URI, CP-98195401, “Advancing Nutrient TMDL Efforts for Upper Narragansett Bay Through Retrospective Analysis of Available Dissolved Oxygen Data and Application to ROMS Model”, \$12,810 (Brown), 9/1/03-8/31/04, Grant to URI. PI’s August, Deacutis, Kiernan, Kincaid (URI), Murray, Prell (Brown), This project synthesized data collected during spatial surveys of dissolved oxygen, temperature, and salinity in Narragansett Bay since 1999, continue time series monitoring, and model circulation in upper Narragansett Bay to address water quality issues.

Publications and Reports (total of 47)

Refereed Journals:

- Rudin, S.M., **Murray, D.W.**, and Whitfeld, T.J.S., 2017, Retrospective analysis of heavy metal contamination in Rhode Island based on old and new herbarium specimens. *Applications in Plant Science*, **5(1)**: 1600108.
- Lyle, M., Marcantonio, F., Moore, W.S., Murray, R.W., Huh, C-A, Finney, B.P., **Murray, D.W.**, and Mix, A.C., 2014, Sediment size fractionation and focusing in the Equatorial Pacific: Effect on ²³⁰Th normalization and paleoflux measurements. *Paleoceanography*, **29**, 747-763.
- Taylor, D.L., Linehan, J.C., **Murray, D.W.**, Prell, W.L, 2012. Indicators of sediment and biotic mercury contamination in a southern New England estuary. *Marine Pollution Bulletin*, **64**, 807-819.
- Tewari, N., Kalkunte, S., **Murray, D.W.**, Sharma, S., 2009. The water channel aquaporin 1 is a novel molecular target of polychlorinated biphenyls for in utero anomalies. *J. of Biol Chem*, **284**, 15224-15232.
- Liu, X., Gurel, V., Morris, D., **Murray, D.**, Zhitkovich, A., Kane, A.B., Hurt, R.H., 2007. Bioavailability of nickel in single-wall carbon nanotubes, *Advanced Materials* **19**, 2790-2796
- Deacutis, C.F., **Murray, D.**, Prell, W., Saarman, E., and Korhun, L., 2006. Hypoxia in the upper half of Narragansett Bay, RI, during August 2001 and 2002. *Northeastern Naturalist*, **13**, 173-198.
- Higginson, M.J., Altabet, M.A., **Murray, D.W.**, Murray, R.W., Herbert, T.D., 2004. Geochemical evidence for abrupt changes in relative strength of the Arabian monsoons during a stadial/interstadial climate transition. *Geochimica et Cosmochimica Acta*, **68**, 3807-3826.
- Higginson, M.J., Altabet, M.A., Wincze, L., Herbert, T.D., **Murray, D.W.**, 2004. A solar (irradiance) trigger for millennial-scale abrupt changes in the southwest monsoon? *Paleoceanography*, **19**, PA3015.
- Kryc, K.A., Murray, R.W., **Murray, D.W.**, 2003. Elemental speciation of Si, Al, Ti, Fe, Ca, Mn, P, and Ba in five marine sedimentary standard reference materials: Results from sequential extractions. *Analytica Chimica Acta*, **487**, 117-128.

- Kryc, K.A., Murray, R.W., **Murray, D.W.**, 2003. Al-to-oxide and Ti-to-organic linkages in biogenic sediment: Relationships to paleoexport production and bulk Al/Ti. *Earth and Planetary Research Letters*, **211**, 125-141.
- Hargrave, B.T., Walsh, I.D., **Murray, D.W.**, 2002. Seasonal and spatial patterns in mass and organic matter sedimentation in the North Water Polynya. *Deep Sea Research II*, **49**, 5227-5244.
- Altabet, M.A., Higginson, M. J., **Murray, D.W.**, 2002. The effect of millennial-scale changes in Arabian Sea denitrification on atmospheric CO₂. *Nature*, **415**, 159-162.
- Altabet, M.A., **Murray, D.W.**, Prell, W.L., 1999. Climatically linked oscillations in Arabian Sea denitrification over the past 1 m.y.: Implications for the marine N cycle. *Paleoceanography*, **14**, 732-743.
- Lee, C., **Murray, D.W.**, et al., 1998. Particulate organic carbon fluxes: compilation of results from the 1995 US JGOFS Arabian Sea process study. *Deep-Sea Research II*, **45**, 2489-2501.
- Lin, H-L, Peterson, L.C., Overpeck, J.T., Trumbore, S., and **Murray, D.W.**, 1997. Late Quaternary climate change from δ18O records of multiple species of planktic foraminifera: High-resolution records from the anoxic Cariaco Basin (Venezuela). *Paleoceanography*, **12**, 415-427.
- Thunell, R. Pride, C., Ziveri, P., Muller-Karger, F., Sancetta, C., **Murray, D.**, 1996, Plankton response to physical forcing in the Gulf of California, *Journal of Plankton Research*, **18**, 2017-2026.
- Clemens, S.C., **Murray, D.W.**, and Prell, W.L., 1996. Nonstationary phase of the Plio-Pleistocene Asian Monsoon. *Science*, **274**, 943-948.
- Schrag, D.P., Hampt, G., **Murray, D.W.**, 1996. Pore fluid constraints on the temperature and oxygen isotopic composition of the glacial ocean. *Science*, **272**, 1930-1932.
- Murray, R.W., Leinen, M., **Murray, D.W.**, Mix, A.C., Knowlton, C.W., 1995. Terrigenous Fe input and biogenic sedimentation in the glacial and interglacial equatorial Pacific Ocean. *Global Biogeochemical Cycles*, **9**:667-684.
- Altabet, M.A., Francois, R., **Murray, D.W.**, Prell, W.L., 1995. Climate-related variations in denitrification in the Arabian Sea from sediment ¹⁵N/¹⁴N ratios. *Nature*, **373**, 506-509.
- Chen, J., Farrell, J.W., **Murray, D.W.**, and Prell, W.L., 1995. Timescale and paleoceanographic implications of a 3.6 m.y. oxygen isotope record from the northeast Indian Ocean (ODP Site 758) *Paleoceanography*, **10**, 21-47.
- Murray, D.W.**, and Overpeck, J.T. (eds.), 1993. Decadal to millennial-scale variability in the climate system. *Quaternary Science Reviews*, **12**.
- Clemens, S.C., Prell, W.L., **Murray, D.W.**, Shimmield, G.B., and Weedon, G.P., 1991. Forcing mechanisms of the Indian Ocean monsoon. *Nature*, **353**, 720-725.
- Lyle, M., **Murray, D.W.**, Finney, B.P., Dymond, J., Robbins, J.M., and Brooksforce, K., 1988. The record of late Pleistocene biogenic sedimentation in the eastern tropical Pacific Ocean. *Paleoceanography*, **3**, 39-59.
- Walsh, I., Fischer, K., **Murray, D.**, and Dymond J., 1987. Evidence for resuspension of rebound particles from near-bottom sediment traps. *Deep-Sea Research*, **35**, 59-70.
- Pisias, N.G., **Murray, D.W.**, and Roelofs, A.K., 1986. Radiolarian and silicoflagellate response to oceanographic changes associated with the 1983 El Niño. *Nature*, **320**, 259-262.
- Murray, D.** and Schrader, H., 1983. Distribution of silicoflagellates in plankton and core top samples from the Gulf of California. *Marine Micropaleontology*, **7**, 517-539.

Book Chapters/Reports:

- Prell, W.L., **Murray, D.W.**, Carlson, L., and Thieleman, E., 2016. Update and integration of the 2014 and 2015 data into the Spatial Survey data set and generation of decade-long (2005-2015) trends of DO and Chlorophyll distribution in mid and upper Narragansett Bay for the NBEP Status and Trends Report, Narragansett Bay Estuary Program, NBEP-16-132. <http://nbep.org/publications/NBEP-16-132.pdf>
- Prell, W.L., Murray, D.W., Howell, P., 2015. Reanalysis of the Narragansett Bay spatial survey (Day Trippers) water column data for temperature, salinity, density, and dissolved oxygen (2005 to 2013), Narragansett Bay Estuary Program, NBEP-15-128. <http://nbep.org/publications/NBEP-15-128.pdf>
- Saarman, E., Prell, W., **Murray, D.W.**, Deacutis, C., 2008. Chapter 11: Summer bottom water dissolved oxygen in Upper Narragansett Bay. In: Science for Ecosystem-based Estuarine Management: Narragansett Bay in the 21st Century, Desbonnet & Costa-Pierce (eds.), Springer Series In Environmental Management, 325-347.
- Murray, D.W.**, Prell, W.L., Rincon, C.E., and Saarman, E., 2007. Physical property and chemical characteristics of surface sediment grab samples from Narragansett Bay and the Providence and Seekonk Rivers, a summary of the Brown University Narragansett Bay Sediment Project (BUNBSP). Narragansett Bay Estuary Program Report, NBEP-07-127. <http://nbep.org/publications/NBP-07-127.pdf>
- Pryor, D., Saarman, E., **Murray, D.**, and Prell, W., 2007. Nitrogen loading from wastewater treatment plants to upper Narragansett Bay. NBEP Report 07-126. <http://nbep.org/publications/NBP-07-126.pdf>
- Murray, D.W.**, Peterson, L.C., 1997. Biogenic carbonate production and preservation changes between 5 and 10 MA from the Ceara Rise, Western Equatorial Atlantic. In, Shackleton, N. J., et al., *Proc. ODP Sci. Results*, **154**, College Station, TX (Ocean Drilling Program), 375-388.
- King, T.A., Ellis, W.G., **Murray, D.W.**, Shackleton, N.J., and Harris, S., 1997. Miocene evolution of carbonate sedimentation at the Ceara Rise: a multivariate data/proxy approach. In, Shackleton, N. J., et al., *Proc. ODP Sci. Results*, **154**, College Station, TX (Ocean Drilling Program), 349-366.
- Schrag, D.P., Hampt, G., **Murray, D.W.**, 1997. Oxygen isotopic composition of interstitial waters from Leg 154: determination of the temperature and isotopic composition of the glacial ocean. In, Shackleton, N. J., et al., *Proc. ODP Sci. Results*, **154**, College Station, TX (Ocean Drilling Program), 201-206.
- Murray, D.W.**, Farrell, J.W., and McKenna, V., 1995. Biogenic sedimentation at ODP Site 847, eastern equatorial Pacific during the past three million years. In, Pisias, N.G., et al., *Proc. ODP Sci. Results*, **138**, College Station, TX (Ocean Drilling Program), 429-460.
- Farrell, J.W., **Murray, D.W.**, McKenna, V.S., and Ravelo, A.C., 1995. Upper ocean temperature and nutrient contrasts inferred from Pleistocene planktonic foraminifer $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ in the eastern equatorial Pacific (ODP Site 847). In, Pisias, N.G., et al., *Proc. ODP Sci. Results*, **138**, College Station, TX (Ocean Drilling Program), 289-320.
- McKenna, V.S., Farrell, J.W., **Murray, D.W.**, and Clemens, S.C., 1995. The foraminifer record of ODP Site 847: paleoceanographic response to late Pleistocene climate variability. In, Pisias, N.G., et al., *Proc. ODP Sci. Results*, **138**, College Station, TX (Ocean Drilling Program), 695-714.
- Farrell, J.W., Raffi, I., Janecek, T.R., **Murray, D.W.**, Levitan, M., Dadey, K.A., Emeis, K-C, Lyle, M., Flores, J-A., and Hovan, S., 1995. Late Neogene sedimentation patterns in the eastern equatorial Pacific Ocean. In Pisias, N.G.,

- Mayer, L.A., Janecek, T.R., Palmer-Julson, A., and van Andel, T.H. (Eds.) *Proc. ODP Sci. Results*, 138: College Station, TX (Ocean Drilling Program), 717-756.
- MacKillop, A.K., Moran, K., Jarrett, K., Farrell, J., Murray, D., 1995. Consolidation properties of equatorial Pacific ocean sediments and their relationship to stress history and offsets in the Leg 138 composite depth sections. *In*, Pisias, N.G., et al., *Proc. ODP Sci. Results*, **138**, College Station, TX (Ocean Drilling Program), 357-369.
- Prell, W.L., **Murray, D.W.**, Clemens, S.C., and Anderson, D.M., 1992. Evolution and variability of the Indian Ocean summer monsoon: evidence from the western Arabian Sea drilling program. *In*, Duncan, R.A. et al.(eds), *Synthesis of Results from Scientific Drilling in the Indian Ocean*, Geophysical Monograph **70**, Amer. Geophy. Union, 447-469.
- Peterson, L.C., **Murray, D.W.**, Ehrmann, W.U., and Hempel, P., 1992. Cenozoic carbonate accumulation and compensation depth changes in the Indian Ocean. *In*, Duncan, R.A. et al.(eds), *Synthesis of Results from Scientific Drilling in the Indian Ocean*, Geophysical Monograph **70**, Amer. Geophy. Union, 311-333.
- Baldauf, J.G., Barron, J.A., Ehrmann, W.U., Hempel, P., and **Murray, D.**, 1992. Biosiliceous sedimentation patterns for the Indian Ocean during the last 45 million years. *In*, Duncan, R.A. et al.(eds), *Synthesis of Results from Scientific Drilling in the Indian Ocean*, Geophysical Monograph **70**, Amer. Geophy. Union, 335-349.
- Murray, D.W.**, and Prell, W.L., 1992. Late Pliocene and Pleistocene climatic oscillations and monsoon upwelling recorded in sediments from the Owen Ridge, northern Arabian Sea. *In*, Summerhayes, C.P., Prell, W.L., and Emeis, K-C (eds), *Upwelling Systems: Evolution Since the Early Miocene*. Geological Society Special Publication No **64**, 301-321.
- Murray, D.W.**, and Prell, W.L., 1991. Pliocene to Pleistocene variations in calcium carbonate, organic carbon, and opal on the Owen Ridge, Northern Arabian Sea. *In*, Prell, W.L. and Niitsuma, N., et al., *Proc. ODP Sci. Results*, **117**, College Station, TX (Ocean Drilling Program), 343-355.
- Fischer, K., Dymond, J., Moser, C., **Murray, D.**, and Matherne, A., 1983. Seasonal variation in particulate flux in an offshore area adjacent to coastal upwelling. *In*, Suess, E. and Thiede, J. (eds), *Coastal Upwelling: Its Sediment Record*, Part A, NATO conference series, New York (Plenum Press), 209-224.
- Murray, D.** and Schrader, H., 1982. The size distribution of the centric diatom *Coscinodiscus nodulifer*, Site 480, Guaymas Basin Slope, Gulf of California. *In*, Curran, J.R., Moore, D.G., et al., *Init. Reports DSDP*, **64**, Washington (U.S. Govt. Printing Agency), 1239-1244.

Web Sites

- Prell, W., **Murray, D.**, Deacutis, C., 2014. Summer-Season survey of dissolved oxygen in upper Narragansett Bay 2005-2013. Data available at <http://www.geo.brown.edu/georesearch/insomniacs/index.html>
- Prell, W., Saarman, E., **Murray, D.**, Deacutis, C., 2004. Summer-Season, Nighttime Surveys of Dissolved Oxygen in Upper Narragansett Bay (1999-2003). Data available at <http://www.geo.brown.edu/georesearch/insomniacs>.