



David Jay Velinsky

The Academy of Natural Sciences
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EDUCATION

- 1987 Old Dominion University (Norfolk, VA)
Ph.D. in Chemical Oceanography;
Dissertation Title: "The geochemistry of selenium and sulfur in a coastal salt marsh"
Thesis Advisor: Dr. Gregory A. Cutter
- 1977 Florida Institute of Technology (Melbourne, FL)
B.S. in Oceanography, minor in Chemistry;
Senior Thesis: "Determination of the redox potential and its relationship to the organic structure of the sediment"

RESEARCH INTERESTS

Fate, transport, and cycling of bio-active elements and contaminants in freshwater and marine systems. Geochemical cycling of organic and inorganic constituents in sediments and waters. Biogeochemistry of fresh and marine tidal wetlands. Watershed changes in water quality. Isotope biogeochemistry of carbon, nitrogen, and sulfur. Chemical method development for environmental studies.

PROFESSIONAL EXPERIENCE

- 2010 – Present Member, Franklin Institution Bower Medal Committee, Earth and Environmental Science Cluster
- 2010 – Present Adjunct Associate Professor, College of Earth, Ocean and Environment, University of Delaware; Newark, DE.
- 2010 – 2010 Adjunct Professor, Center for Public Policy, College of Arts and Sciences, Drexel University
- 2009 – Present Board of Trustees; Partnership for the Delaware Estuary (Wilmington, DE)
- 2007 – Present Vice President/Director- Patrick Center for Environmental Research
The Academy of Natural Sciences (Philadelphia, PA)

- 2006 – Present Science and Technical Advisory Committee (STAC), Delaware Estuary Program, Partnership for the Delaware Estuary (Wilmington, DE)
- 2006 – 2007 Acting Vice President/Director- Patrick Center for Environmental Research
The Academy of Natural Sciences (Philadelphia, PA)
- 2004 - 2006 Sea Grant Science Advisory Committee Member (New Jersey)
- 2002 - Present Delaware Estuary Program, Toxics Advisory Workgroup, Delaware River Basin Commission (West Trenton, NJ)
- 1995 - Present Director, Environmental Biogeochemistry Section, Patrick Center for Environmental Research, The Academy of Natural Sciences, (Philadelphia, PA).
- 1998 – 2004 Visiting Research Professor; School of Environmental Science; Drexel University.
- 1991 - 2002 Jug Bay Wetlands Sanctuary, Science Advisory Committee; Chairperson.
Chesapeake Bay Program (EPA); Toxics Subcommittee
- 1990 - 1995 Environmental Geochemist, Interstate Commission on the Potomac River Basin (Rockville, MD).
Lecturer, U.S. Department of Agriculture Graduate School, Natural Sciences Department (class: Estuarine Ecosystems).
- 1987 - 1990 Post-Doctoral Research Fellow, College of Marine Studies, University of Delaware, and Geophysical Laboratory, Carnegie Institution of Washington.
Visiting Investigator, Geophysical Laboratory, Carnegie Institution of Washington.
- 1982 – 1984 Research Assistant, Atmospheric Sciences Div., NASA Langley Research Center.
- 1979 – 1980 Laboratory Technician, Arnold Greene Testing Laboratory (Natick, MA).

OTHER PROFESSIONAL ACTIVITIES

Various journal reviews for Marine Chemistry, Estuaries, Marine Environmental Research, Geochimica Cosmochimica Acta, Limnology and Oceanography, and others.

Various proposal reviews for National Science Foundation, NOAA Sea Grant, U.S. EPA, Chesapeake Bay Program, Hudson River Foundation.

Invited participant: PCBs in Fish Tissue (U.S. EPA); Sediment Contamination Forum (U.S. EPA); Sources of Copper: Brake Pad Forum (Common Ground for the Environment, Stanford Univ.); Sediment Bioaccumulation Forum (U.S. EPA).

Judge at Fairfax County Science Fair (1991-1993)

Session Chairperson (joint with Dr. Greg Foster, GMU): Environmental Geochemistry in Urban Watersheds, Society of Environmental Toxicology and Analytical Chemistry (San Francisco, CA, November, 1997).

Invited participant: Connecticut/New York Sea Grant Scientific Proposal Review Panel: Lobster/Shellfish Disease Studies of Long Island Sound (2003)

Sea Grant Panel Reviewer: NJ Sea Grant; Proposal Review Panel (2005)

Sea Grant Panel Reviewer: PA Sea Grant; Proposal Review Panel (2005)

Session Chairperson, S05 Delaware River/Bay at Society of Environmental Toxicology and Analytical Chemistry (Baltimore, MD, November, 2005).

Academy of Natural Sciences' Town Square (Public Forum): Chemicals in the Delaware Estuary. American Philosophical Society (January, 2005).

Science on Tap: The Slippery Facts on Oil; Public Forum at National Mechanics Bar (June, 2010)

Ad Hoc Review Committee, Technical Qualification Board, US EPA Headquarters, Promotion review for EPA Staff to GS-14 (National Expert) (August, 2010).

Regional NOAA Sea Grant Participant: Regional Planning Study Group (July 2011)

GRADUATE EXPERIENCE

1985 - 1987 Research Assistant, Department of Oceanography, Old Dominion University

1983 - 1985 Teaching Assistant, Department of Oceanography, Old Dominion University

1980 - 1983 Research Assistant, Department of Oceanography, Old Dominion University

SCHOLARSHIPS AND AWARDS

Old Dominion University Summer Scholarship (1984)

Outstanding Doctoral Student, Dept. of Oceanography (1987)

Dissertations Symposium on Chemical Oceanography Participant (1987)

Award for Excellence of Program Development-Patrick Center (1998)

MEMBERSHIPS

American Chemical Society

American Geophysical Union

Society of Environmental Toxicology and Chemistry

Coastal and Estuarine Research Federation

North American Benthological Society

STUDENT ADVISEMENT/COMMITTEES

Youness Sharfi, Ph.D. Candidate; expected 2011. Department of Civil and Environmental, College of Engineering; Temple University.

Steven Pearson, Ph.D. Candidate, expected 2011; Department of Bioscience and Biotechnology; Drexel University

Niveen Ismail, M.S., 2010. Department of Biology, Temple University (Graduated; presently at Stanford University)

Dack Stuart, M.S., 2010, College of Earth, Ocean, and Environment, University of Delaware (Graduated)

Matthew Gray, M.S., 2010. Department of Bioscience and Biotechnology; Drexel University (Graduated, presently at Oregon State University)

Erin McKinley, BS, 2010. Department of Environmental Studies, Northland College, Ashland, WI (NSF REU 2008)

Angie Huff, MES, 2007. College of General Studies, Master of Environmental Studies, University of Pennsylvania, Philadelphia, PA.

Marcel Vasquez, BS 2008; Philadelphia University, Department of Chemistry. NSF REU Student 2007 and Chemistry Intern (2007-2008).

Ashley Smyth; B.S., 2006 (Highest Honors) Department of Marine Sciences, Carolina Environmental Program, University of North Carolina at Chapel Hill (NSF REU 2005 Advisor and Senior Thesis Co-Advisor; Currently: Ph.D program in Marine Science, UNC)

Lisa Methratta, Ph.D., 2002. Department of Biology; University of Pennsylvania. (Currently at VERSAR Inc.; Columbia, Maryland)

Ms. Anne-Marie Compton-O'Brien, M.S., 2002. Department of Chemistry, Northern Arizona University, Flagstaff, Az. (Currently at University of Alaska, Fairbanks)

Chris Osburn, Ph.D., 2000, Department of Earth and Environmental Sciences, Lehigh University (Currently at Naval Research Laboratory; Research Scientist)

Dana Dugan; Department of Chemistry, Philadelphia University, Summer Intern and Senior Thesis; 1999-2000

Alison Potash, Department of Oceanography, Coastal Carolina University, Summer Intern; 1999

Karin Werner, BS. 1996, Biology Department, Haverford College, Summer Intern

Nathaniel E. Ostrom, Ph.D., 1992. Department of Earth Sciences, Memorial University of Newfoundland, April, 1992. (Currently at Michigan State University; Associate Professor)

Susan Ziegler, BS, Senior Thesis, University of Massachusetts, Amherst; 1992 (Currently at a University of Arkansas; Assistant Professor in Biology).

CRUISE EXPERIENCE (selected)

1990 to Present	Numerous small boats for tidal wetland research	Many days
2003	R/V Bay Eagle ; Anacostia River	2 days
1999	R/V Discovery ; Delaware and Schuylkill Rivers	Many Days
1995	R/V Aquarius ; Anacostia and Potomac River Chief Scientist: Dr. David Velinsky	3 days
1989	R/V Clifford Barnes . Saanich Inlet, B.C. Chief Scientist: Dr. Bradley M. Tebo	6 days
1989	R/V Trygve Braarud . Framvaren Fjord, Norway Chief Scientist: Dr. Jens Skei	10 days
1987 - 1988	R/V Cape Henlopen . Delaware River/Bay/Shelf Chief Scientist: Dr. Jonathan H. Sharp	30 days
1985	R/V Cape Henlopen . Chesapeake Bay/Shelf. Chief Scientist: Dr. Tom Church	5 days
1983	USNS Bartlett . Gulf Stream/Exuma Sound Chief Scientist: Dr. Adam Zsolany	10 days
1982	USNS Lynch . Sargasso Sea. Chief Scientist: Dr. David Reid	20 days

PUBLICATIONS

Velinsky, D.J., G.R. Riedel, J.T. Ashley and J.Cornwell 2011. A contamination history of the Anacostia River, Washington, D.C. Environmental Assessment and Monitoring (*online*).

Weston, N.B., M.A. Vile, S.C. Neubauer and D.J. Velinsky. 2011. Accelerated microbial organic matter mineralization following salt-water intrusion into tidal freshwater marsh soils. Biogeochemistry 102 (1-3):135-151

Stansley, W., D.J. Velinsky and R. Thomas. 2010. Mercury and halogenated organic contaminants in river otters (*Lontra Canadensis*) in New Jersey USA. Environmental Toxicology and Chemistry; 29: 2235-2242.

Ashley, J.T.F., J.S. Ward, M.W. Schafer, H.M. Stapleton, and D.J. Velinsky. 2010 Polychlorinated biphenyls and polybrominated diphenyl ethers in fish oil supplements: Evaluating exposure and health risks. Food Additives and Contaminants 27(8): 1177-1185.

- Ashley, J.T.F., M.L. Webster, J.E. Baker, R. Horwitz, and D.J. Velinsky. 2009. Polychlorinated biphenyls in sediment and biota from the Delaware River estuary. *Proceedings of the Academy of Natural Sciences*. 158: 89-105
- McGee, B.L, A.E. Pinkney, D.J. Velinsky, J.T.F. Ashley, D.J. Fisher, L.C. Ferrington and T.J Norberg-King. 2009. Using the sediment quality triad to characterize baseline conditions in the Anacostia River, Washington, DC. *Environmental Monitoring and Assessment*: 156: 51-67
- Bushaw-Newton, K.L, D.A. Kreeger, S. Doaty, and D.J. Velinsky. 2008. Utilization of *Spartina*-and *Phragmites*-derived dissolved organic matter by bacteria and ribbed mussels (*Geukensia demissa*) from Delaware Bay salt marshes. *Estuaries and Coasts* 31: 694-703.
- Fairchild, G.W. and D.J. Velinsky. 2006. Effects of small ponds on headwater stream water chemistry. *Lake and Reservoir Management*. 22: 22(4): 321-330.
- Church, T.M., C. Sommerfield, D.J. Velinsky, D. Point, C. Benoit, D. Amouroux, D. Plaa and O. Donard. 2006. Marsh sediments as records of sedimentation, eutrophication and Metal pollution in the urban Delaware Estuary. *Marine Chemistry* 102(1-2): 72-95.
- Velinsky, D.J., K. Bushaw-Newton, T.E. Johnson and D.A. Kreeger. 2006. Effects of a dam removal in SE Pennsylvania on stream chemistry. *Journal of the North American Benthological Society (JNABS)* 25(3):569-582.
- Ashley, J.T.F., K. Bushaw-Newton, M. Wilhelm, A. Boettner, G. Drames, and D.J. Velinsky. 2006. The effects of small dam removal on the distribution of sedimentary contaminants. *Environmental Monitoring and Assessment* 114(1-3): 287-312.
- Fairchild, G.W., J.N. Anderson and D.J. Velinsky. 2005. The trophic state "chain of relationships" in ponds: does size matter? *Hydrobiologica* 539: 35-46.
- Bushaw-Newton, K.L., J. T. Ashley, and D.J. Velinsky. 2005. A Process for Assessing the Ecological Effects of a Proposed Dam Removal. *Hydroreview* 24(3): 36-44.
- Ashley, J.T.F., A. Moore, H. Stapleton, and D.J. Velinsky. 2003. Sedimentary nonylphenol contamination in an urbanized/industrialized segment of the Delaware River Estuary, USA. *Bull. Environ. Cont. Toxicol.* 70: 978-984.
- Hart, D.D., T.E. Johnson, K. Bushaw-Newton, R.J. Horwitz, A. Bednarek, D.F. Charles, D.A. Kreeger and D.J. Velinsky. 2002. Dam Removal: Challenges and Opportunities for Ecological Research and River Restoration. *Bioscience* 52(8): 669-681.
- Bushaw-Newton, K.L., D. D. Hart, T. E. Johnson, J. Pizzuto, J. Egan, M. Keeley, J. Lawrence, J. Thomson, J.T. Ashley, R.J. Horwitz, D. Charles, C. Gatenby, D.A. Kreeger, T. Nightengale, R.L. Thomas and D.J. Velinsky. 2002. An Integrative Approach Towards Understanding Dam Removal: The Manatawny Creek Study. *Jour. American Water Resources Association* 38(6): 1581-1600.

- Johnson T.E., W.C. Hession, D.F. Charles, R.J. Horwitz, D.A. Kreeger, B.D. Marshall, J.D. Newbold, J.E. Pizzuto and D.J. Velinsky. 2001. An interdisciplinary study of the ecological benefits of riparian reforestation in urban watersheds. In: Proceedings of the World Water and Environmental Resources Congress (ASCE), May 20-24, 2001, Orlando, FL, Section 1, Chapter 242.
- Foster, G.D., E.C. Roberts, B. Gruessner and D.J. Velinsky. 2000. Hydrogeochemistry and transport of organic contaminants in an urban watershed of Chesapeake Bay. *Applied Geochemistry* 15: 901-915.
- Hession, W.C., T.E. Johnson, D.F. Charles, D.D. Hart, R.J. Horwitz, D.A. Kreeger, J.E. Pizzuto, D.J. Velinsky, J.D. Newbold, T. Clason, A.M. Compton, N. Coulter, L. Fuselier, B.D. Marshall, and J. Reed. 2000. Ecological benefits of riparian reforestation in urban watersheds: Study design and preliminary results. *Environ. Monitor. Assess.* 63(1): 211-222.
- Velinsky, D.J. and M.L. Fogel 1999. Cycling of dissolved and particulate nitrogen and carbon in the Framvaren Fjord, Norway: Isotopic variations. *Marine Chemistry* 67: 161-180.
- Huanxin, W., B.J. Presley, and D.J. Velinsky. 1997. Distribution and sources of phosphorus in tidal river sediments in the Washington, D.C. area. *Environmental Geology* 30(3/4): 224-230.
- Pennock, J.R., D.J. Velinsky, J.L. Ludlam, J.H. Sharp, and M.L. Fogel. 1996. Isotopic fractionation of nitrogen during the uptake of ammonium and nitrate by *Skeletonema costatum*. *Limnology and Oceanography*. 41(3): 451-459.
- Velinsky, D.J., T.L. Wade, C. Schlekot and B.J. Presley. 1994. Tidal river sediments in the Washington, D.C. area. I. Distribution and sources of trace metals. *Estuaries*, 17: 305-320.
- Wade, T.L., D.J. Velinsky, E. Reinharz, and C.E. Schlekot. 1994. Tidal river sediments in the Washington, D.C. area. II. Distribution and sources of chlorinated and non-chlorinated aromatic hydrocarbons. *Estuaries*, 17: 321-333.
- Schlekot, C.E., B.L. McGee, D.M. Boward, E. Reinharz, T.L. Wade, and D.J. Velinsky. 1994. Tidal river sediments in the Washington, D.C. area. III. Biological effects associated with sediment contamination. *Estuaries*, 17: 333-344.
- Fogel, M.L., L.A. Cifuentes, D.J. Velinsky, and J.H. Sharp. 1992. Carbon limitation during photosynthesis by estuarine phytoplankton. *Marine Ecology Progress Series*, 82: 291-300.
- Velinsky, D.J., D.J. Burdige and M.L. Fogel. 1991. Nitrogen diagenesis in marine sediments: Isotope effects. Carnegie Institution Yearbook; *Annual Report of the Director*, Geophysical Laboratory, 1990-1991, 2250, 154-162.
- Velinsky, D.J., J.F. Todd, B.M. Tebo and M.L. Fogel. 1991. Isotopic fractionation of dissolved ammonium in anoxic waters. *Geophy. Res. Letters*: 18(4): 649-652.
- Velinsky, D.J. and G.A. Cutter. 1991. Diagenesis of selenium in a coastal salt marsh. *Geochim. Cosmochim. Acta*: 55, 179-191.
- Velinsky, D.J. and G.A. Cutter. 1990. Determination of elemental selenium and pyrite-selenium in sediments. *Anal. Chim. Acta* 235: 419-425.

Coffin, R.B., D.J. Velinsky, R. Devereux, W.A. Price and L.A. Cifuentes. 1990. Stable carbon and nitrogen isotopes analysis of bacterial nucleic acids. *App. Environ. Microbiol.* 56 (7): 2012-2020.

Velinsky, D.J., T.C. Hoering, T.G. Ferdelman, G.W. Luther, L.A. Cifuentes, and T.M. Church. 1990. Determination of the ^{34}S of elemental sulfur from marine sediments. Carnegie Institution Yearbook; *Annual Report of the Director*, Geophysical Laboratory, 1989-1990, 2200; 118-122.

Velinsky, D.J., J.R. Pennock, J.H. Sharp, L.A. Cifuentes, and M.L. Fogel. 1989. Determination of the isotopic abundance of dissolved ammonium-nitrogen from estuarine waters at the natural abundance level. *Marine Chemistry* 26: 351-361.

Velinsky, D.J., M.L. Fogel, and B. M. Tebo. 1989. Isotopic composition of dissolved nitrogen in the Black Sea. Carnegie Institution Yearbook; *Annual Report of the Director*, Geophysical Laboratory, 1988-1989, 2150; 123-130.

Cutter, G.A. and D.J. Velinsky. 1988. Temporal variations of sedimentary sulfur in a Delaware salt marsh. *Marine Chemistry* 23(3/4): 311-328.

Fogel, M.L., D.J. Velinsky, L.A. Cifuentes, J.R. Pennock and J.H. Sharp. 1988. Biogeochemical processes affecting the stable carbon isotopic composition of particulate carbon in the Delaware Estuary. Carnegie Institution Yearbook; *Annual Report of the Director*, Geophysical Laboratory, 1987-1988, 2102; 107- 113.

Velinsky, D.J., T.L. Wade, and G.T.F. Wong. 1986. Atmospheric deposition of organic carbon to Chesapeake Bay. *Atmospheric Environment* 20(5):941-947.

ABSTRACTS AND PRESENTATIONS

Sommerfield, C.K. and D.J. Velinsky. 2011. Understanding tidal marsh accretion in Delaware Estuary. Presented at the 2011 Delaware Estuary Science Conference, Cape May, NJ. Partnership for the Delaware Estuary (www.delawareestuary.org/news_pde_science_conference_presentations.asp)

Elsy-Quirk, T., A. Smyth, M. Piehler, B.P. Horton, J. Mead and D.J. Velinsky. 2011. Denitrification in an urban tidal freshwater wetland of the Delaware. Presented at the 2011 Delaware Estuary Science Conference, Cape May, NJ. Partnership for the Delaware Estuary (www.delawareestuary.org/news_pde_science_conference_presentations.asp)

Velinsky, D.J., D. Charles, C.K. Sommerfield, R. Greene, and T. Fikslin. 2011. Tidal marshes in the Delaware Estuary: Historical Reconstruction of chemical loadings. Presented at the 2011 Delaware Estuary Science Conference, Cape May, NJ. Partnership for the Delaware Estuary, (www.delawareestuary.org/news_pde_science_conference_presentations.asp)

Zelanko, P., N.H. Rice and D.J. Velinsky. 2011. Using carbon and nitrogen stable isotopes of *Pandion haliaetus* to infer historic ecosystem characteristics within the Delaware Bay. Presented at the 2011 Delaware Estuary Science Conference, Cape May, NJ. Partnership for the Delaware Estuary (www.delawareestuary.org/news_pde_science_conference_presentations.asp)

- Zelanko, P., N.H. Rice, and D.J. Velinsky 2010. Using stable isotopes of an apex predator to infer ecosystem characteristics over time in the Delaware Bay region. Presented at the Tenth International Conference on Applications of Stable Isotope Techniques to Ecological Studies; University of Alaska, Fairbanks (AK); June 2010.
- Sommerfield, C.K. and D.J. Velinsky. 2010. Sediment Accumulation and Marsh Accretion in Tidal Wetlands of a Coastal Plain Estuary. Presented at the 2010 American Geophysical Ocean Sciences Meeting, Portland, OR.
- Velinsky, D.J. and C.K. Sommerfield. 2009. Rates of Sediment Accumulation and Marsh Accretion in Tidal Wetlands of the Delaware River Estuary. Presented at the 2009 Coastal and Estuarine Research Federation Meeting, Portland, OR.
- Horwitz, R.J., J. Mead, A. Raus, J. Babcock-Stiner, J. McNair and D.J. Velinsky 2009. Comprehensive watershed management planning in Chautauqua Lake (New York, USA). Proc. Of 13th World Lakes Conference. Wuhan. November 1-4, 2009.
- Thomas, R., D.J. Velinsky, D. Charles, and C.K. Sommerfield. 2009. Tidal Marshes in the Delaware Estuary: Historical Reconstruction of Chemical Loadings and Ecosystem Effects. Presented at the 2009 Coastal and Estuarine Research Federation Meeting, Portland, OR.
- Enache, M. D.J. Velinsky, D. Charles, and C.K. Sommerfield. 2009. Diatom-based Reconstruction of Past Environmental Changes in the Delaware River Tidal Region along a North-South Transect. Presented at the 2009 Coastal and Estuarine Research Federation Meeting, Portland, OR.
- Weston, N.B., M.A. Vile, S.C. Neubauer, and D.J. Velinsky. 2009. Sea Level Rise and Salt-Water Intrusion Limit Vertical Accretion Potential in Tidal Freshwater Marshes of the Delaware River. Presented at the 2009 Coastal and Estuarine Research Federation Meeting, Portland, OR.
- Schafer, M., D.J. Velinsky, J. Ashley, H. M. Stapleton and C.K. Sommerfield. 2009. Detection and Assessment of PBDEs in Delaware River Estuary Cores. SETAC North America 30th Annual Meeting, New Orleans, LA.
- Ashley J.T.F., M. Vasquez, H. Stapleton, M. Schafer, R.Horwitz and D.J. Velinsky. 2009. Bioaccumulation of PCBs and PBDEs within a tidal freshwater marsh. Presented at the 2009 Delaware Estuary Science Conference, Cape May, NJ.
- Weston, N.B., M.A. Vile, S.C. Neubauer and D.J. Velinsky. 2009. The impact of climate change and sea level rise on tidal freshwater marshes of the Delaware River Estuary. Presented at the 2009 Delaware Estuary Science Conference, Cape May, NJ.
- Zelanko, P., E. McKinley, J.T.F. Ashley, M. Vasquez, R. Horwitz, and D.J. Velinsky. 2009 Trophic Relationships within Tinicum Marsh, Philadelphia, PA: Insights from the Stable Isotopes of Carbon and Nitrogen. Presented at the 2009 Delaware Estuary Science Conference, Cape May, NJ.

- Velinsky, D.J. 2008. Impact of Climate Change on the Water Quality and Biogeochemical Processes. Presented at workshop hosted by Academy and Partnership for the Delaware Estuary (May, 2008); *Climate Change in the Delaware Estuary*. The Academy of Natural Sciences (Forum and Town Square) (Invited).
- Horwitz, R.J., D. Velinsky, and D. Charles. The Manatawny Creek Dam Removal Study. Invited presentation at symposium on dam removal. State College, PA. May, 2008.
- Velinsky, D.J. 2008. Tidal Marshes in the Delaware Estuary: Historical Reconstruction of Chemical Loadings and Ecosystem Effects. 2008 Zhoushan National Symposium on Mariculture, Zhejiang Ocean University (Invited)
- McKinley, E., P. Zelanko, J.Ashley and D.J.Velinsky. 2008. Trophic Relationships within Tinicum Marsh, Philadelphia, PA: Insights from the Stable Isotopes of Carbon and Nitrogen. 2008 Sigma Xi Annual Meeting and Student Research Conference, Washington, DC.
- Weston, N.B., M.A. Vile, D.J. Velinsky, S.C. Neubauer and S.B. Joye. 2007. Shifting Pathways and Magnitude of Organic Matter Mineralization in Tidal Freshwater Marshes Following Sea-Level Rise. Estuarine Research Federation, Providence, RI.
- Velinsky, D.J., C. Sommerfield, J.A. Ashley, R. Greene, and D. Charles. 2007. Tidal marshes in urban environments: Historical reconstruction of chemical loadings and ecosystem effects. Society of Environmental Toxicology and Chemistry 28th Annual Meeting, Milwaukee, WI November, 2007.
- Schafer, M. L. Zaoudeh, D. Butera, G.F. Riedel, D.J. Velinsky, J.A. Ashley, and J. Cornwell. 2007. Sediment contamination in the tidal freshwater Potomac and Anacostia Rivers: A pollution history of Washington, D.C. Society of Environmental Toxicology and Chemistry 28th Annual Meeting, Milwaukee, WI November, 2007.
- Thomas, R.L. D.F. Charles, C.A. Flinders and D.J. Velinsky. 2007. A Multi-Year Study of Periphyton Dynamics in the Jackson River: Patterns of Biomass and Community Structure and the Relationship to Physico-Chemical Conditions. North American Benthological Society 55th Annual Meeting, Columbia, SC, June 2007.
- Flinders, C.A., D.F. Charles, O. Gibb, D.D. Hart, R.J. Horwitz, R.L. Thomas, D.J. Velinsky, J. Zalack. 2007. Using Pulsed Flows in the Jackson River: Spatial Effects of a Planned and Natural Pulsed Flow Event on Biomass. North American Benthological Society 55th Annual Meeting, Columbia, SC, June 2007.
- Horwitz, R.J., D.F. Charles, C.A. Flinders, D.D. Hart, D.H. Keller, R.L. Thomas, D.J. Velinsky, J. Zalack. 2007. Using Pulsed Flows in the Jackson River: Effects of High Flow Refuges on Periphyton Biomass during a Pulsed Flow Experiment. North American Benthological Society 55th Annual Meeting, Columbia, SC, June 2007.
- Vile, M., N. Weston, D. Velinsky, and S. Neubauer. 2007. Assessing the Impact of Climate Change Induced Sea-Level Rise on Carbon Cycling Dynamics in Freshwater Tidal Marshes. Presented at the Society of Wetland Scientists, 10th International Symposium on Biogeochemistry of Wetlands, Annapolis, MD. April, 2007.

- Weston, N.B., M.A.Vile, D.J.Velinsky, S. Joye and S.C. Neubauer. 2007. Rising sea levels and salinity intrusion into tidal freshwater marshes: Shifting microbial communities and pathways of organic matter mineralization. Presented at the American Society of Limnology and Oceanography 2007 Annual Meeting. Santa Fe, NM, February, 2007.
- Fairchild, G.W. and D.J. Velinsky. 2007. The chemical effects of ponds on streams. Presented at the American Society of Limnology and Oceanography 2007 Annual Meeting. Santa Fe, NM. February, 2007.
- McLaughlin, C, A Smyth, DJ Velinsky, NB Weston, O Gibb, R Thomas, and MA Vile. The Impact of Salinity Intrusion on the Biogeochemical Cycling of C in Sediments from Tidal Freshwater Marshes. 2006. Presented at the Atlantic Estuarine Research Society (AERS) Meeting at The Academy of Natural Sciences, Philadelphia, PA. (March, 2006).
- Weston, NB, DJ Velinsky, D Fonseca and MA Vile. 2006. Climate Change and Salinity Intrusion into Tidal Freshwater Marshes: Coupling Shifting Microbial Populations and Community Compositions to Attendant Changes in Metabolic Rates. Presented at the Atlantic Estuarine Research Society (AERS) Meeting at The Academy of Natural Sciences, Philadelphia, PA (March, 2006).
- Fairchild, G.W. and D.J. Velinsky. 2006. Chemical Transformations of streamwater by headwater ponds of varying size and trophic state. 91st Ecological Society of America (ESA) Meeting, Memphis, TN (Aug, 2006)
- Smyth, A, D.J.Velinsky, S.Ensign, M.Phieler and M. Vile. 2006. Two Marshes, One Problem: The Impact of Sea Level Rise on Freshwater Tidal Marshes. Presented at the Southeast Estuarine Research Society (SEERS) Meeting. Savannah, GA (October, 2006).
- McLaughlin, C., A. Smyth, D.J. Velinsky, R.L. Thomas, and M. Vile. 2006. The impact of salinity intrusion on the biogeochemical cycling of C in sediments from tidal freshwater marshes. North American Benthological Society Annual Meeting, Athens, GA. June, 2006. *Bulletin of the North American Benthological Society*. 23(1): 749.
- Velinsky, D.J., C.J. Flinders, D.F. Charles, and R.L. 2006. Thomas Benthic algae response following phosphorus reduction in a nutrient point source. North American Benthological Society Annual Meeting, Athens, GA. June, 2006. *Bulletin of the North American Benthological Society*. 23(1): 704.
- Fairchild, G.W. and D.J. Velinsky. 2005. Physicochemical determinants of trophic state, nutrient transformations and downstream export in headwater ponds. North American Lake Management Society (NALMS) Annual Meeting. Madison, WI
- Velinsky, D.J., G.F. Riedel, J. Ashley, G. Foster, and C. Schultz. 2004. Spatial and temporal changes in trace contaminants in the tidal Anacostia River after precipitation events. Pg. 148 (talk 668). Presented at the 25th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Portland, OR, November, 2004.
- Riedel, G.F., D.J. Velinsky, J. Ashley, T.L. Wade, and J. Cornwell. 2004. Sediment contamination in the Anacostia River: A pollution history of Washington, D.C. pg. 124 (talk 552). Presented at the 25th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Portland, OR, November, 2004.

- Velinsky, D.J., Ashley, J.T.F. and C. Schultz. 2004. Understanding the fate and transport of PCBs in the tidal freshwater Anacostia River, Washington, D.C. 228th National American Chemical Society, Philadelphia, PA (Abst # 768675).
- Kreeger, D. A., R.L. Thomas, N. Saxe and D.J. Velinsky. 2003. Spatial and temporal variability in fitness and carbon and nitrogen stable isotopes in *Crassostrea Virginica* in San Antonio Bay, TX. Presented at the 2003 Estuarine Research Federation, Seattle, WA.
- Velinsky, D.J., C.A. Flinders, N.E. Saxe and R.L. Thomas. 2003. Incorporation of pulp mill effluent solids in aquatic food webs: use of carbon and nitrogen stable isotopes. North American Benthological Society Annual Meeting, Athens, GA. June, 2003. *Bulletin of the North American Benthological Society*. 20(1): 232.
- Church, T., C. Sommerfield, D.J. Velinsky, D. Point, C. Benoit, D. Amouroux, O. Donard. 2003. Historical Pollution As Recorded In Marsh Sediments Of The Upper Delaware River. *Eos Trans. American Geophysical Union*, 84(52), Ocean Sci. Meet. Suppl., Abstract OS21D.
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PUBLIC OUTREACH

What's In the Water: Article in *Boston Herald American*; 1978

Mercury in Fish from the Local Area; Article in *Philadelphia Inquirer*; 2003

Remains of the Monitor Faces a Corrosive Enemy: Article in *Philadelphia Inquirer*; 2005

Muck tells a story for scientists to read. Article in *Wilmington News Journal*, November 4, 2007.

Interviews for articles in *Time*, *NPR*, *Philadelphia Inquirer*, *Metro* Newspaper (Philly) and others.

Lectures for public including ANSP's Town Square; High School Teacher Workshops, Har Zion Day School.

Quoted in article in *The Press of Atlantic City* "EPA Climate Change Study to target the Delaware Estuary", June 30, 2008.

Quoted in article in *The Philadelphia Inquirer*, December 7, 2009: "Assessing Delaware River with dynamic diatoms" by Tom Avril.

Introduced the Philadelphia movie premier of "The End of the Line" a film shown at the Sundance Film Festival focusing on the depletion of fish in the worlds oceans (June 2009).

Moderated Town Square at the Academy of Natural Sciences entitled: "*Health Care, Food Safety, and Antibiotics*:" Sponsored by the The Pew Charitable Trusts (July 2009)

Moderated Town Square at the Academy of Natural Sciences entitled: "*Marcellus Shale: The Science and The Policy*". Sponsored by the Academy of Natural Science (April, 20, 2010).

Science on Tap: The Slippery Facts about Oil Spills at the National Mechanics Pub (May 25, 2010).

Quoted in article in *The Philadelphia Inquirer*, August 16, 2010; "What will gobble the spilled oil" by Faye Flam

Quoted in article in *The Philadelphia Inquirer*, October 12, 2010; "Study sees threat in shale gas drilling" by Sandy Bauers (front page, above the fold!)

Interviewed by WHYY, KYW and AP for articles about the Marcellus Shale and Climate Change.

Interviewed for video about the Academy and research (D. Keller); video hosted on Vermont Public Radio (Fall, 2010)

INVITED SEMINARS

2011 University of Pennsylvania, Perelman School of Medicine/Center for Excellence in Environmental Toxicology
Sponsor: Dr. Trevor Penning

2010. Villanova University, Department of Environmental Sciences,
Sponsor: Dr. Nat Weston

2009. St. Josephs University, Department of Biology, 8th McGroddy Science Lecture Series.
Sponsor: Dr. Jonathan Fingerut

US Environmental Protection Agency, Region III. Water Resources Group.
Sponsor: Mr. Thomas Belton

- 2008 Zhejiang Ocean University at 2008 Zhoushan National Symposium on Mariculture, Zhejiang, China
Academy of Natural Sciences; Climate Change in the Delaware Estuary
Presented at workshop hosted by Academy and Partnership for the Delaware Estuary
- 2007 Philadelphia University, Department of Biology
Sponsor: Dr. Jeff Ashley
University of Pennsylvania, Department of Biology, EcoLunch
Sponsor: Ms. Emma Aronson
- 2006 American University, Department of Biology,
Sponsor: Dr. Karen Bushaw-Newton
Pennsylvania State University, York, Department of Biology
Sponsor: Dr. Matt Hotch
- 2005 American Philosophical Society, Town Square
Sponsor: Dr. D. James Baker
Philadelphia Water Department; Environmental Section
Sponsor: Ms. Paula Connolly
- 2003 George Mason University, Department of Chemistry
Sponsor: Dr. Gregory Foster
- 2002 Johns Hopkins University, Advanced Academic Graduate Program; Environmental Science and Policy Program. Class Lecture
Sponsor: Mr. Chris Swarth
University of Pennsylvania, Department of Biology.
Sponsor: Dr. Peter Petratis
- 2000 Drexel University, School of Environmental Science, Engineering, and Policy
Sponsor: Dr. Clarie Welty
Patuxent Wildlife Research Center, United States Geological Survey
Sponsor: Dr. Richard Hammerschlag
Philadelphia University, Department of Environmental Science
Sponsor: Dr. William Brendley, Jr.
- 1997 The American University, Department of Biology
Sponsor: Dr. W.C. Banta
- 1996 Drexel University, School of Environmental Science, Engineering, and Policy
Sponsor: Dr. Clarie Welty

- 1995 Sigma XI Chapter, The Academy of Natural Sciences
Sponsor: Dr. Dominique Didier Davit
- 1993 Lehigh University, Department of Earth and Environmental Sciences
Sponsor: Dr. Gray Bebout
- 1992 National Oceanic and Atmospheric Administration, NOS/ORCA
Sponsor: Dr. Nathalie Valette-Silver
- Smithsonian Institution, Smithsonian Environmental Research Center
Sponsor: Dr. David Correll
- University of South Alabama, Department of Marine Sciences
Sponsor: Dr. Erich Mueller
- 1991 University of Toronto, Department of Geology
Sponsor: Dr. Jeff Fawcett
- Florida International University; Department of Chemistry
Sponsor: Dr. William Cooper
- University of Uppsala, Department of Limnology
Sponsor: Ms. Katarina Vrede/ Dr. Russell Bell
- The Academy of Natural Sciences, Division of Environmental Research;
Sponsor: Dr. John Sherman
- 1990 Old Dominion University, Department of Oceanography;
Sponsor: Dr. David J. Burdige
- American Chemical Society, Division of Geochemistry, "Progress in Marine Chemistry", Special session in honor of Dr. E. D. Goldberg;
Sponsor: Dr. Thomas M. Church
- Carnegie Institution of Washington, Geophysical Laboratory;
Sponsor: Dr. Francis Boyd
- 1989 Chalmers University of Technology and University of Goteborg,
Department of Analytical and Marine Chemistry;
Sponsor: Dr. David Dyrssen
- University of Florida, Department of Fisheries and Aquaculture;
Sponsor: Dr. Claire Schelske
- 1988 Oak Ridge National Laboratory, Environmental Sciences Division;
Sponsor: Dr. Patrick J. Mulholland
- United States Geological Survey, Water Resources Division;
Sponsor: Dr. Carol Kendall