

**JOHAN CORNELIS VAREKAMP**  
*Harold T. Stearns Professor of Earth Science*  
**Earth & Environmental Sciences, 265 Church Street**  
**Wesleyan University, Middletown CT 06459-0139 USA**  
<http://www.wesleyan.edu/eecs/JCV/varekamp.html>

**PERSONAL:**

**Born** January 21, 1951, Utrecht, The Netherlands, **Married** to Ellen Thomas; two children  
Dutch Citizen; [jvarekamp@wesleyan.edu](mailto:jvarekamp@wesleyan.edu) tel: 01 860 685 2248; fax 01 860 685 3651

**EDUCATION:**

Ph.D. 1979 Utrecht University, The Netherlands; Geochemistry  
Thesis: Geology and petrology of the Vulsinian volcanic area, Latium, Italy.  
M.S. 1975 Utrecht University, The Netherlands  
Honors: 1) Geochemistry, Structural Geology; 2) Sedimentology.  
B.S. 1971 Utrecht University, The Netherlands, Honors: Geology.

**PROFESSIONAL EXPERIENCE:**

2009 Meierjurgan Faculty Fellow, University of Oregon, OR  
2005–present Harold T. Stearns Professor of Earth Science  
2005–2008 Chair, E&ES department  
2005 Director ECCO program (Wesleyan-Wellesley-Vassar) in Bologna, Italy  
2003–present Adjunct Professor, Latin American Studies Program, Wesleyan University  
2001–2005 George I. Seney Professor of Geology (Chair, E&ES)  
1996–present Professor, E&ES, Wesleyan University, CT, USA (Chair EES 2000–2002 )  
Co-Director, Environmental Studies Certificate Program, 1998–2003  
1995 Faculty Fellow, Doshisha University, Kyoto, Japan  
1991 Visiting Professor, Laboratorio di Geochimica Isotopica, CNR, Pisa, Italy  
1990–1991 Sabbatical visitor, Dept. of Earth Sciences, Cambridge University, U.K.  
1990–1995 Associate Professor, E&ES, Wesleyan University, CT, USA, Chair E&ES  
1986 Sabbatical visitor, Utrecht University, The Netherlands  
1983–1990 Assistant Professor E&ES, Wesleyan University, CT, USA  
1979–1982 Postdoctoral fellow, Dept. of Geology, Ariz. State Univ., Tempe AZ, USA  
1975–1979 Instructor, Dept. of Structural Geology, Utrecht University, The Netherlands

**RESEARCH INTERESTS:**

**Volcanology/Geochemistry:** Element recycling in arcs; Magma chamber processes;  
Eruption dynamics; Chemistry of hydrothermal systems and crater lakes

**Environmental studies:** Sea level rise; Geochemistry of mercury/heavy metals; Chemical  
and isotopic proxies for paleoclimate reconstruction; eutrophication/contamination of large  
estuaries, Global Climate Change, human impact on local and global scales

## **PROFESSIONAL ACTIVITIES/POSITIONS**

Co-chief scientist, 1984, Snellius II expedition Indonesia, volcanology program  
Convener/organizer: 1996, AGU-Chapman conference on crater lakes, Crater Lake, OR  
2004, IAVCEI workshop on Volcanic Lakes, Caviahue, Argentina  
2005, Conference on Coastal Pollution Issues, Bologna, Italy  
Chair, 2000-2010, IAVCEI, Committee on Volcanic Lakes  
Chair, 2005-2010, AGU, VGP committee on Education and Outreach  
Member, 2001-2003, Advisory Board of 'Save the Sound'  
Member, 1997-2004, Science Advisory Committee, Connecticut Audubon Coastal Center  
Member, 1996-present, Senior Board, Connecticut Sea Grant College Program, Groton, CT  
Member, 2002-present, EPA, LIS Science and Technology Advisory Committee (STAC)  
Member, 2005 – present, Board of Trustees, CT Fund for the Environment / Save the Sound  
Member, 2005 - present, Board of Directors, CT Agricultural Experiment Station

## **EDITORIAL POSITIONS:**

Editorial Board, 2002-2006, **J. Volcanology and Geothermal Research**  
Editor, 1998-2001, **Eos**, AGU, Volcanology-Geochemistry-Petrology section  
Editor, 2000-2001, McGraw Hill, **Encyclopedia of Science and Technology**  
Co-editor, 1984, **J. Volcanology Geothermal Research**, Special Issue, El Chichon eruption  
Co-editor, 1997-1999, **J. Volcanology Geothermal Research**, Special Issue, 'Crater Lakes'  
Co-editor, 1999-2000, **J. Coastal Research**, Special Issue, 'Long Island Sound'  
Co-editor, 2006-2008, **J. Volc. Geothermal Research**, special issue on 'Volcanic Lakes'  
Co-editor, 2008-2010, **J. Volcanology Geothermal Research**, Special Issue Continental Arc  
Volcanism, in honor of James Luhr  
Co-Editor, 2006-, **IAVCEI-Geol. Soc. London book series**, Acid Lakes and Rivers of  
Copahue Volcano, Argentina  
Steering committee member EPA, 2007, monograph on Long Island Sound

## **PROFESSIONAL SOCIETY AFFILIATIONS / WORKING GROUP**

### **MEMBERSHIPS:**

Geochemical Society; Am. Geophysical Union; Geol. Soc. Am.; Int. Assoc. of Volcanology  
and Chem. of the Earth's Interior; Royal Netherlands Geological and Mining Society;  
IAVCEI comm. explosive volcanism; IAVCEI comm. volcanic gases; IAVCEI Committee of  
Volcanic Lakes

## **Publications, Grantmaking, & Citations (November 2010)**

**64 peer-reviewed articles, 241 abstracts, 1733 citations, h-index: 23**

**\$1.47 million external research funding, \$3.8 million external programmatic funding,  
\$53,000.- Wesleyan University research and teaching funding.**

## RESEARCH SUPPORT

\$100,000.	1984	Volcanic studies in Indonesia, Snellius II expedition
\$ 4,000.	1984	Bradley Mining Co., Hg pollution assessment, Clear Lake CA
\$ 1550.	1985	Various agencies, heavy metal studies in CT
\$25,000	1985-1987	NSF, volcanologic research in Indonesia
\$ 5,000.	1988	Combustion Engineering, Inc., Hg pollution assessment
\$ 2,500.	1989	NECUSE, research support, volcanology
\$ 5200.	1989/1994	Northeast Utilities, Miles, Inc., Acid rain project
\$ 17,400.	1990	CT SeaGrant, sea level rise studies
\$ 30,000.	1991	Northeast Utilities, neotectonic studies, Connecticut
\$110,000.	1991-1994	NOAA, sea level rise studies
\$ 38,000.	1992-1993	CT SeaGrant, coastal salt marsh studies
\$ 56,000.	1994-1996	CT SeaGrant, sea level rise studies
\$100,000.	1994-1996	NOAA, sea level rise studies
\$ 3000.-	1993	NECUSE, research support, volcanology
\$59,073.-	1995	Long Island Sound Research Fund/ CT DEP, Hg pollution LIS
\$ 4500.-	1995-1997	Northeast Utilities, Pb pollution
\$56,000.-	1996-1998	CT SeaGrant, coastal marsh studies
\$57,000.-	1996-1998	LISRF, Mercury contamination in CT
\$20,000.-	1996	NSF, DOE and USGS Chapman meeting support
\$ 9950.-	1996	USGS, Hg studies, LIS
\$57,800.-	1996	Perkin and Elmer Inc, ICP-AES instrument donation
\$47,750.-	1998-2000	CT SeaGrant, coastal salt marsh evolution
\$16,000.-	1998	USGS, Hg and trace metal studies, LIS
\$38,500.-	1999	NSF, Hydrogeochemistry of Copahue volcano, Argentina
\$15,960.-	1999	USGS, Marine Atlantic Branch, Long Island Sound studies
\$25,000.-	1999	Yale University, instrument donation (□ ray counters)
\$55,800.-	2000-2002	CT SeaGrant, LIS paleoenvironments
\$77,000.-	2000-2002	EPA - LIS paleoenvironmental studies
\$44,000.-	2000-2004	USGS metal pollution studies
\$123,000.-	2001-2002	Lobster Research Fund: Environmental Studies of LIS
\$55,500.-	2002-2004	CT SeaGrant, Hatting Mercury in the Housatonic watershed
\$1000.-	2002	CT Assoc. of Wetland Sc., LEFOR award (with Beth Goldoff)
\$15,600.-	2003	National Geographic Society, Volcanic Research in the Andes
\$128,000.-	2004	EPA, Nitrogen isotope tracers for nutrient cycling in LIS
\$21,250.-	2004	NSF, Workshop support, Volcanic Lakes, Argentina
\$2000.-	2005	American Philosophical Society, Franklin Grant
\$36,600.-	2007	Keck Consortium
\$2500.-	2008	CT SeaGrant College program / Sounds Conservancy
\$149,000.-	2010	NSF EARTH/IF, new XRF facility

**FUNDING FOR INSTITUTIONAL/PROGRAMMATIC SUPPORT:**

\$290,000.-	2000-2006	Mellon Foundation, Environmental Studies support
\$3,500,000	2000	Schumann Foundation, Env. Studies Certificate Program
\$25,000.-	2000	NSF, Funding for Coastal Center of the CT Audubon Society

**WESLEYAN UNIVERSITY GRANTS:**

\$920.	1983	Volcanic studies on Nisyros, Greece
\$800.	1987	Petrologic studies of Italian potassic volcanics
\$900.	1985	Heavy metals in Connecticut River estuarine sediments
\$1,025.	1986	Petrology of King's Trough basalts, Atlantic Ocean
\$1,250.	1989	Acid rain monitoring programs
\$1200.-	1992	Mercury abundances in deep sea clays
\$1000.-	1993	McNair Fund, undergraduate research support, volcanology
\$1100.-	1995	Pedagogical grant, Global Change course prep.
\$1487.-	1998	Long Island Sound pilot study
\$19,950.-	1999	Establishment of an atmospheric CO <sub>2</sub> monitoring facility
\$10,800.-	2002	Creation of a GIS laboratory and GIS course
\$3000.-	2005	Ethics in Environmental Science
\$1000.-	2008	Feet to the Fire (Art-Science module, climate class EES 389))
\$5500.-	2008	Mellon Faculty Grant (Block Island studies)
\$2500.-	2008	Arsenic and Phosphorous in acid rivers, Copahue, Argentina
\$1000.-	2009	Feet to the Fire (Art Science module, Ethnomusicology)
\$20,000	2009	Weather station at the Wesleyan University campus

**UNIVERSITY SERVICE:**

Chairman: E&ES (1992-1993; 2000-2002, 2005-2008)  
Member: Student Affairs Committee (1985-1986; 1991-1992)  
Committee Human Rights and Relations (1986-1987; 1991-1992)  
Tenure Task Force (1988-1989); Shop Committee (1989, 1996; 1997, 2002-present)  
Science Planning Committee (1993); Comm. Gen. Education (1996-1997);  
Graduate Council (1998-1999), Comm. International Studies (2001-present)  
Review and Appeals Board (2003-2005; 2010).  
Taskforce on the hiring of women in the sciences  
University Committee on 'College of the Environment' 2008-present  
Co-Director: Environmental Studies Certificate program, 1998-2003  
Director: Wesleyan-Wellesley-Vassar ECCO program in Bologna, Italy (2005)

### **PUBLICATIONS IN PROFESSIONAL JOURNALS:**

1. Wensink, H., Zijdeveld, J.D.A. and **Varekamp**, J.C., 1978: Paleomagnetism and ore mineralogy of some basalts of the Geirud formation of Late Devonian-Early Carboniferous age from Southern Alborz, Iran. *Earth Plan. Sc. Lett.*, 41, 441-450.
2. **Varekamp**, J.C., 1979: The geology and petrology of the Vulsinian volcanic area, Latium, Italy. *Geologica Ultraectina*, 22, p. 384.
3. Wensink, H. and **Varekamp**, J.C., 1980: Paleomagnetism of basalts from Alborz. Iran part of Asia in the Cretaceous. *Tectonophysics*, 68, 113-129.
4. **Varekamp**, J.C., 1980: The geology of the Vulsinian volcanic area, Latium, Italy. *Bull. Volc.*, 43, 487-503.
5. **Varekamp**, J.C., 1980: Relations between tectonics and volcanism in the Roman province, Italy. In: *Tephra studies*. Eds. Self, S. and Sparks, R.S.J., NATO Advanced Study Institute Series, Series C, 219-225.
6. **Varekamp**, J.C. and Buseck, P.R., 1981: Mercury emissions from Mt. St. Helens during September 1980. *Nature*, 293, 555-556.
7. Thomas, E., **Varekamp**, J.C. and Buseck, P.R., 1982: Zinc enrichment in the phreatic ashes from Mt. St. Helens. *J. Volc. Geoth. Res.*, 12, 339-350.
8. **Varekamp**, J.C. and Thomas, E., 1982: Chalcophile elements in Cretaceous / Tertiary boundary sediments: Terrestrial or extraterrestrial?. *GSA, Spec. Paper* 190, 461-467.
9. Barton, M., **Varekamp**, J.C. and van Bergen, M.J., 1982: Complex zoning of clinopyroxenes in the lavas of Vulcini, Latium, Italy: Evidence for magma mixing. *J. Volc. Geoth. Res.*, 14, 361-388.
10. **Varekamp**, J.C., 1983: The significance of mafic nodules in the ultra-potassic rocks from Italy, a discussion. *J. Volc. Geoth. Res.*, 16, 161-165.
11. **Varekamp**, J.C. and Buseck, P.R., 1983: Hg anomalies in soils: a geochemical exploration method for geothermal areas. *Geothermics*, 12, 29-47.
12. **Varekamp**, J.C. and Buseck, P.R., 1984: The speciation of mercury in hydrothermal systems, with applications for ore deposition. *Geochim. Cosmochim. Acta*, 48, 177-186.
13. **Varekamp**, J.C. and Buseck, P.R., 1984: Changing mercury anomalies in Long Valley, California: Indication for magma movement or seismic activity. *Geology*, 12, 283-286.
14. **Varekamp**, J.C., Luhr, J.F. and Prestegard, K.L., 1984: The 1982 eruptions of El Chichon volcano (Chiapas, Mexico): Character of the eruptions, ash-fall deposits, and gasphase. *J. Volc. Geoth. Res.*, 23, 39-68.
15. Luhr, J.F., Carmichael, I.S.E. and **Varekamp**, J.C., 1984: The 1982 eruptions of El Chichon volcano, Chiapas, Mexico: Mineralogy and petrology of the anhydrite-bearing pumices. *J. Volc. Geoth. Res.*, 23, 69-108.
16. **Varekamp**, J.C. and Buseck, P.R., 1986: Global mercury flux from volcanic and geothermal sources. *Applied Geochemistry*, 1, 65-73.
17. **Varekamp**, J.C., Thomas, E., Germani, M. and Buseck, P.R., 1986: Particle chemistry of the volcanic plumes of Mt. Etna and Mt. St. Helens. *J. Geophys. Res.*, 91, B12, 12,233-12,248.
18. **Varekamp**, J.C., and Waibel, A., 1987: Natural cause for mercury pollution at Clear Lake, California, and paleotectonic inferences, *Geology* 15, 1018-1021.

19. **Varekamp**, J.C., 1988: Lake pollution modelling. *J. Geol. Educ.*, 36, 4-9.
20. **Varekamp**, J.C., and Kalamarides, R., 1989: Hybridization processes in leucite tephrites from Vulcini (Italy), and the evolution of the Italian potassic suite. *J. Geophys. Res.*, 94, B4, 4603-4618.
21. Poorter, R.P.E., **Varekamp**, J.C., van Bergen, M.J., Kreulen, R. Sriwana, T., Vroon, P.Z., and Wirakusumah, A.D., 1989: The Sirung volcanic boiling spring: An extreme chloride-rich, acid brine on Pantar (Lesser Sunda Islands, Indonesia). *Chemical Geology*, 76, 215-228.
22. **Varekamp**, J.C., van Bergen, M.J., Vroon, P.Z., Poorter, R.P.E., Wirakusumah, A.D., Erfan, R.D., Suharyono, K., and Sriwana, T. 1989: Volcanism and tectonics in the eastern Sunda Arc, Indonesia, *Neth. J. of Sea Res.*, 24, 303-312.
23. Poorter, R.P.E., **Varekamp**, J.C., Sriwana, T., van Bergen, M.J., Erfan, R.D., Suharyono, K., and Wirakusumah, A.D., 1989: Geochemistry of hot springs and fumarolic gases from the Banda Arc and Eastern Sunda Arc. *Neth. J. of Sea Res.*, 24, 323-331.
24. van Bergen, R.D., Erfan, R.D., Sriwana, T., Suharyono, K., Poorter, R.P.E., **Varekamp**, J.C., Vroon, P.Z., and Wirakusumah, A.D., 1989: Spatial variations in geochemical signatures of arc volcanism in East Indonesia. *Neth. J. of Sea Res.*, 24, 313-322.
25. Poorter, R.P.E., **Varekamp**, J.C., Poreda, R.J., vanBergen, M.J. and Kreulen, R., 1991: Geochemistry and isotopic composition of volcanic gases from the Banda and Eastern Sunda arcs, Indonesia, *Geochim. Cosmochim. Acta* 55, 3795-3807.
26. Limburg, E. and **Varekamp**, J.C., 1991: Young Pumice deposits on Nisyros, Greece. *Bull. of Volc.* 54, 68-77.
27. Thomas, E., and **Varekamp**, J.C., 1991: Paleo-Environmental analyses of marsh sequences (Clinton, CT): Evidence for punctuated sealevel rise during the latest Holocene. *J. of Coastal Res.*, SI, v.11, 125-158.
28. **Varekamp**, J.C., 1991: Trace element geochemistry and pollution history of mudflat and marsh sediments from the Connecticut coastline. *J. of Coastal Res.*, SI, v.11, 105-123.
29. **Varekamp**, J.C., Thomas, E. and van de Plassche, O., 1992: Relative sea level rise and climate change over the last 1500 years. *Terra Nova* 4, Spec. Issue (ed. Wezel), 293-304.
30. **Varekamp** J.C., Kreulen R., Poorter R.P.E. and VanBergen M.J. , 1992: Carbon sources of arc volcanism with applications for the carbon cycle. *Terra Nova* 4, Spec. Issue (ed. Wezel), 363-373.
31. VanBergen, M.J., Vroon, P.Z., **Varekamp**, J.C., and Poorter R.P.E., 1992: The origin of the potassic rock suite of Batu Tara (East Sunda Arc, Indonesia). *Lithos* 28, 261-282.
32. **Varekamp**, J.C., 1992: Some remarks on volcanic vent evolution during Plinian eruptions. *J. Volc. Geotherm. Res.* 54, 309-318.
33. Vroon, P.Z., Van Bergen, M.J., White W.M., and **Varekamp**, J.C., 1994: Sr-Nd-Pb isotope systematics of the Banda arc, Indonesia: Combined subduction and assimilation of continental material. *J. Geophys. Res.* 98, 22,349-22,366.
34. Pasternack, G. and **Varekamp**, J.C., 1994: The geochemistry of the Keli Mutu crater lakes, Flores Indonesia. *Geochemical Journal* 28, 243-262.

35. Francalanci, L., **Varekamp**, J.C., Vougioukalakis, G., Defant, M.J., Innocenti, F., and Manetti, P., 1995: Crystal retention, fractionation, and crustal assimilation in a convecting magma chamber, Nisyros volcano, Greece, *Bull. of Volcanol.* 56, 601-620.
36. Nydick, K.R., Bidwell, A., Thomas, E. and **Varekamp**, J.C., 1995: A sealevel rise curve from Guilford, CT, *Marine Geology* 124, 137-159.
37. Pasternack, G.B. and **Varekamp** J.C., 1997: Volcanic lake systematics.I. Physical constraints. *Bull. Volc.* 58, 528-538.
38. Hoogewerff, J.A., VanBergen, M.J., Vroon, P.Z., Hertogen, J., Wordel, R., Sneyers, A., Nasution, A., **Varekamp**, J.C., Moens, H.L.E., and Mouchel, D., 1997: U-series, Sr-Nd-Pb isotope and trace-element systematics across an active island arc-continent collision zone: Implications for element transfer at the slab-wedge interface. *Geochimica Cosmochimica Acta*, 61, p.1057-1072.
39. **Varekamp**, J.C. and Thomas, E., 1998: Climate change and the rise and fall of sea level over the millenium. *EOS* 79, p. 69-75.
40. **Varekamp**, J.C. and Thomas, E. , 1998: Volcanic and anthropogenic contributions to global weathering budgets. *J. Geochem. Exploration*, 62, 149-159.
41. **Varekamp**, J.C., Thomas, E., and Thompson, W.G., 1999: Sea level - climate correlation during the past 1400 yr: A comment. *Geology*, 27, 189-190.
42. **Varekamp**, J.C., and Kreulen, R., 2000, The stable isotope geochemistry of volcanic lakes: examples from Indonesia. *J. Volcanology Geothermal Research* 97, 309-327.
43. Sriwana, T., VanBergen, M.J., and **Varekamp**, J.C., 2000, The geochemistry of Kawah Putih, an acid crater lake in Java, Indonesia, *J.Volc. Geothermal Res.* 97, 77-104.
44. **Varekamp**, J.C., Pasternack, G.B. and Rowe, G.L., 2000, Volcanic lake systematics II. Chemical constraints. *J.Volc. Geothermal Res.* 97, 161-180.
45. **Varekamp**, J.C., Buchholtz ten Brink, M.R., Mecray, E.L., and Kreulen, B., 2000, Mercury in Long Island Sound sediments. *J. Coastal Research. Spec. issue*, 16, 613-626.
46. Thomas, E., Gapotchenko\*, T., **Varekamp**, J.C., Buchholtz ten Brink, M.F., and Mecray, E., 2000, Foraminifera in Long Island Sound surface sediments in 1999: evidence for recent environmental change, *J. Coastal Res., Spec. issue*, 16, 641-655.
47. **Varekamp**, J.C., Ouimette\*, A., Herman\*, S., Delpino, D., and Bermudez, A., 2001, The 1990-2000 eruptions of Copahue, Argentina: a 'bee-hive volcano' in turmoil. *Geology* 29, 1059-1062 (with cover photo).
48. Fehn, U., Snijder, G. and **Varekamp**, J.C., 2002, Evidence for marine sediment recycling in subduction zones from <sup>129</sup>I in crater lakes. *J. Volcanology Geothermal Research*, 115, 451-460.
49. **Varekamp**, J.C., Kreulen\*, B., and Buchholtz ten Brink, M.F, and Mecray, E., 2003, Mercury contamination chronologies from Connecticut wetlands and Long Island Sound sediments. *Environmental Geology*, 43, 268-282.
50. **Varekamp**, J.C., 2003, Lake contamination models: evolution towards steady state. *J. of Limnology*, 62 (suppl.1), 67-72.
51. **Varekamp**, J.C., Ouimette\*, A. and Kreulen. R., 2004, The magmato-hydrothermal system of Copahue volcano, Argentina. *Proceedings of the 11<sup>th</sup> Water Rock Interaction Symposium*, (eds Wanty, R.B. & Seal, R.R.), v.1, 215-218, Balkema Publishers, Leiden.

52. **Varekamp, J. C.**, 2004, Copahue Volcano: A modern terrestrial analog for the Opportunity landing site. *Eos*, 85, #41, 12 October 2004, p. 401-407.
53. **Varekamp, J. C.**, Mecray, E.L., and Zierzow\*, T., 2005, Once spilled, still found: Metal contamination in Connecticut wetlands and Long Island Sound sediment from historic industries. Chapter in book on 'Our Changing Coasts', editors Whitelaw and Visiglione, E.Elgar Publishers, Chapter 9, p. 122-147.
54. Gammons C. H., Wood S. A., Pedrozo F., **Varekamp J.C.**, Nelson B., Shope C.L., and Baffico, G. 2005 Hydrogeochemistry and rare earth element behavior in a volcanically acidified watershed in Patagonia, Argentina. *Chemical Geology* 222, 249-267.
55. **Varekamp, J.C.**, 2005, Reply to comment by Jorge Guala-Valverde on: Lake contamination models for evolution towards steady state. *J. Limnology* 24, 159-160.
56. **Varekamp, J. C.**, J. Maarten deMoor\*, Matt D. Merrill\*, Anna S. Colvin\*, Adam R. Goss\*, Pieter Z. Vroon and David R. Hilton, 2006, The Geochemistry and Isotopic Characteristics of the Caviahue Copahue Volcanic Complex, Province of Neuquen, Argentina. *GSA Special Paper*, 407, 317-342.
57. **Varekamp, J.C.** 2006, The historic fur trade and climate change. *Eos*, 87, # 52, 26 December 2006.
58. Francalanci, L., **Varekamp, J. C.**, Vougioukalakis, G.E., Innocenti, F. and Manetti, P., 2007, Is there a compositional gap at Nysiros volcano? A Comment. *Lithos.* **95**, 458-461; doi:10.1016/j.lithos.2006.06.016.
59. Dunagan\* S. C., Gilmore M. S. and **Varekamp J. C.**, 2007, Effects of mercury on visible/near-infrared reflectance spectra of mustard spinach plants (*Brassica rapa P.*), *Environmental Pollution*, 148, 301-311, doi:10.1016/j.envpol.2006.10.023.
60. Hernández, P.A., N. M. Pérez, **J. C. Varekamp**, B. Henriquez, A. Hernández, J. Barrancos, E. Padrón David Calvo and G. Melián, 2007, Crater lake temperature changes of the 2005 eruption of Santa Ana volcano, El Salvador, Central America, *Pure and Applied Geophysics*, special Issue - Volcano Monitoring; 164, 2507-2522.
61. **Varekamp, J. C.**, 2008, The acidification of glacial Lake Caviahue, Province of Neuquen, Argentina. Special issue 'Volcanic Lakes', *J. Volcanology and Geothermal Research*, special issue "Volcanic Lakes and Environmental Impacts of Volcanic Fluids" 178, 184-196. doi:10.1016/j.jvolgeores.2008.06.016
62. **Varekamp, J. C.**, Herman\*, S., Ouimette\*, A., Flynn\*, K., Bermudez, A., and Delpino, D., 2009, Naturally acid waters from Copahue volcano, Argentina. *Applied Geochemistry*, spec. issue on 'Geogenic acid fluids' v. 24, 208-220.
63. Bani, P., Oppenheimer, C., Varekamp, J.C., Quinou, T., Lardy, M., and Carn, S., 2009, Remarkable geochemical changes and degassing at Vouï crater lake, Ambae volcano, Vanuatu. *J. of Volcanology and Geothermal Research*, 188, 347-357.
64. **Varekamp, J. C.**, Hesse, A., and Mandeville, C., 2010, Back-arc basalts from the Loncopue graben (Province of Neuquen, Argentina). *J. Volc. Geothermal Research*, Spec Issue Continental Margin Volcanism, Jim Luhr, 197, 313-328.

### MANUSCRIPTS:

1. Goss A.R., Gutmann J.T, **Varekamp J.C.**, Kamenov G.D., Paz Moreno F. A., and Hilton D.R., Origin of the Pinacate Volcanic Field, Sonora, Mexico: Evidence for Melting of Heterogeneous Mantle along the Margin of the Gulf of California.
2. Colvin, A., Rose, W.I., **Varekamp, J.C.**, Patrick, M.R., Palma, J.L., and Maclean, A., Crater lake evolution at Santa Ana volcano during volcanic unrest, 2004-2008. *J. Volcanology and Geothermal Research*
3. **Varekamp, J. C.**, Thomas, E. and Lewis, R., The early history of Long Island Sound. *Geology* (in revision after review).
4. Neurath, R. **Varekamp, J.C.**, and Newton, R. A 150-Year Record of Mercury Deposition at Block Island, RI . *Environmental Science & Technology*.
5. **Varekamp, J.C.**, Thomas, E., Veeneman, C., Neurath, R., Bartolai, A., Scheick, J., Gillig, S., and Kravet, E., Paleo-environmental evolution of Block Island, RI. *Paleo-Paleo*
6. Wohlford, T., **Varekamp, J.C.**, and deBoer, J.Z., The NE Aegean arc. *Chemical Geology*
7. **Varekamp, J. C.**, Chemical and thermal monitoring of active volcanoes. *GSA Today*
8. **Varekamp, J. C.**, Neupane\*, A., Gyure, R., and Gilmore, M. S., Mercury cycling in natural and genetically modified cottonwood plants. *Science of the Total Environment*
9. **Varekamp et al.** The human impact on Long Island Sound – chemical and ecological effects. *Science*.
10. **Varekamp J.C.** Mercury contamination from historic hatmaking factories in CT, USA. *Science of the whole environment*.

### BOOKS AND TEXTBOOK CHAPTERS:

**Acid Rivers and Lakes of Copahue Volcano, Argentina** (Editors: Varekamp, J.C. and Geller, W. *IAVCEI-Geological Society of London, Volcanology book series*; in progress)

1. **Introduction** – Geller, Varekamp, Coffey
2. **The Copahue – Caviahue Volcanic Complex** (Varekamp, Bermudez, Delpino, Goss)
3. **The hydrothermal system of Copahue volcano** (Varekamp, Pedrozo, Gammons)
4. **Hydrochemistry of the Rio Agrio** (Gammons, Varekamp, Pedrozo, Parker,, Kringel)
5. **Lake Caviahue** (Geller, Varekamp, Schimmele, Boehrer, Pedrozo, Temporetti)
6. **The Caviahue hydrothermal ‘geome’: an analog for Mars environments?** (Varekamp et al)

**The State of the Sound** (Eds. Yarish and Swanson) – several chapters in progress, Springer, 2009.

### Textbook Chapters:

**Varekamp, J.C.**, 1990: Volcanic Gases, In: "Earth Sciences", Open University, The

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**2008 (12)**

- Thomas, E., Lewis, R., and **Varekamp, J. C.**, The Formation and Evolution of Long Island Sound – the ‘American Black Sea’ June 6, AMQUA, PennState Univ., PA.
- Gillig, S., and **J. C. Varekamp**. The Impact of the Beaver Fur Trade on Landscapes and Atmospheric Methane. June 6, AMQUA, PennState University, PA.
- Varekamp, J.C.**, Thomas, E, and Lewis, R.S., The Formation and Evolution of Long Island Sound. GSA Annual meeting, Programs with Abstracts
- Goss, A.R., Gutmann, J.T., **Varekamp, J.C.**, and Kamenov, G., Pb Isotopes and Trace Elements of the Pinacate Volcanic Field, Northwestern Sonora, Mexico: A Basin and Range Mini-Plume near the EPR Spreading Center. GSA Annual Meeting, Programs with Abstracts
- Altabet, M.A., **Varekamp, J. C.**, and Boon, N. A., The Nitrogen Isotope Biogeochemistry of Long Island Sound. LISRC, October, 2008.
- Varekamp, J. C.** and Thomas E., Paleo-environmental Records from Long Island Sound: a Thousand Year Perspective. LISRC, October 2008.
- Ku, T.C.W., **Varekamp, J.C.**, N. Anderson, and N. Boon, The Sedimentary Record of Sulfur Cycling in Long Island Sound: Implications for Future Remediation Efforts. LISRC, October 2008.
- Varekamp, J.C.**, Ellen Thomas, and the Keck Research Team, The Environmental History of Block Island, RI. NEERS research conference, Block Island, October 2008.
- Thomas, E, **Varekamp, J.C.**, and the Keck Research Team, Great Salt Pond (Block Island, RI) environments. NEERS research conference, Block Island, October 2008.

Colvin, A., Rose, W.I. Escobar, D., Gutierrez, E., Montalvo, F., Olmos, R., Palma, J.L., **Varekamp, J.C.**, and Patrick, M., Crater lake evolution during volcanic unrest: case study of the 2005 phreatic eruption of Santa Ana volcano, El Salvador. AGU fall meeting abstracts

**Varekamp, J.C.**, Kading T., Fehn U., and Lu, Z., Mercury and Iodine systematics of volcanic arc fluids. AGU fall meeting

Kading, T., Brophy, M., and **Varekamp, J.C.**, Compositional Trends in acid fluids of Copahue volcano, Argentina: Evidence for a failed eruption in 2004? AGU fall meeting.

## 2009 (10)

Neurath, R., Newton, R., **Varekamp, J. C.**, Atmospheric Mercury deposition in an isolated environment: a 300-year record at Block Island, Rhode Island. GSA NE meeting: North-Central Section, 43rd Annual Meeting (2-3 April 2009), abstracts volume.

Colvin, A., Rose, W. I., Escobar, D., Gutierrez, E., Montalvo, F., Olmos, R., **Varekamp, J. C.**, Patrick, M., Maclean, A., and Palma, J. L., 2009, Crater Lake Evolution During Volcanic Unrest: Case Study Of The 2005 Phreatic Eruption At Santa Ana Volcano, El Salvador. Abstract #156659, GSA NE meeting: North-Central Section, 43rd Annual Meeting (2-3 April 2009), abstracts volume.

**Varekamp, J. C.**, and Thomas, E., 2009. Block Island, RI: a microcosm for the study of anthropogenic and natural environmental change. 22<sup>th</sup> annual Keck Symposium. April 17-18, 2009; Franklin & Marshall College, Lancaster, PA.

Thomas, E., **Varekamp, J. C.**, Bartolai, A., Gillig, S., Kravet, E., Neurath, J., Scheick, R., Veeneman, C., 2009. Environmental Evolution of Block Island, RI. *GSA Abstr. Progr.*, 41 (7): 526.

Rea, J., **Varekamp, J.C.**, Mandeville, C, Goss, A.R., Colvin, A, 2009, Regional Magmatic Setting Of Callaqui Volcano (S-Andes, Chile). *GSA Abstr. Progr.*, 41 (7): 111.

**Varekamp, J.C.**, Kading, T., Bermudez, A., and Delpino, D., 2009, Twelve Years Of Element Flux Measurements At Copahue Volcano, Argentina. *GSA Abstr. Progr.*, 41 (7): 411.

Kading, T. and **Varekamp, J.C.**, 2009, Lake Caviahue (Argentina) as a Source-Sink for Volcanic Arsenic and Phosphorus. *GSA Abstr. Progr.*, 41 (7): 645.

Kading, T. and **Varekamp, J.C.**, 2009, Copahue Volcano, Argentina: Introducing 'Extreme Environments' on Earth to High School Students. *GSA Abstr. Progr.*, 41 (7): 491.

Thomas, E., **Varekamp, J. C.**, Cooper, S., Sangiorgi, F., Donders, T., 2009, Proxies for Eutrophication in Long Island Sound. 'Coasts and Estuaries in a Changing World', CERF 2009, Portland, OR (Nov. 1-5, 2009).

**Varekamp, J. C.**, Altabet, M. Thomas, E., Ten Brink, M., Andersen, N., and Mccray, E., 2009. Hypoxia in Long Island Sound - Since When and Why. 'Coasts and Estuaries in a Changing World', CERF 2009, Portland, OR (Nov. 1-5, 2009).

## 2010 (11)

**Varekamp, J. C.**, Thomas, E., Bartolai, A., Gillig, S., Kravet, E., Neurath, J., Scheick, R., Veeneman, C., 2010. The evolution of Great Salt Pond (Block Island, RI) over the last 3500 years, Abstract 76-7, GSA Abstract vol. 42, n.1, p. 176.

- Thomas, E., **Varekamp, J. C.**, Cooper, S., Sangiorgi, F., Donders, T., 2010. Microfossil proxies for anthropogenic environmental changes in Long Island Sound. Abstract 76-6, GSA Programs and Abstracts, vol. 42, n. 1, p. 175-176
- Varekamp, J.C.**, Kading, T., Bermudez, A., and Delpino, D., 2010, Twelve years of volcanic fluid chemistry monitoring at Copahue Volcano, Argentina. IAVCEI-CVL-7 workshop, San Jose, Costa Rica, April 2010, abstract volume.
- Kading, T., **Varekamp, J.C.**, Andersson, M., Balcom, P., and Mason, R., 2010, Watershed attenuation of volcanic Hg, As, and P at Copahue Volcano, Argentina. IAVCEI-CVL-7 workshop, San Jose, Costa Rica, April 2010, abstract volume.
- Varekamp, J.C.**, A. Haynes, S. Yudhistira, A. Malouta, E. Thomas, R. Neurath, R. Newton, Mercury Contamination in Long Island Sound: Local Sources Versus Atmospheric Deposition. LIS Research conference, Stamford, CT, Oct 29-Oct 30.
- Warren, C., **J. Varekamp**, A. Wadi, E. Thomas, A Four-Thousand Year TEX 86 Record of Long Island Sound Surface Water Temperature. LIS Research conference, Stamford, CT, Oct 29-Oct 30.
- Thomas, E., A. Haynes, S. Yudhistira, A. Malouta, **J. Varekamp**. Salt Marsh Recovery in Jarvis Creek Marsh, Branford, CT: Tides Rule. LIS Research conference, Stamford, CT, Oct 29-Oct 30.
- Kading, T., **J. C. Varekamp**, M. Andersson, P. Balcom, R. P. Mason, Mercury speciation, fluxes, and fate in the volcanically acidified fluids of Copahue volcano, Argentina. AGU, fall meeting, December 2010, **B23F-0446**
- Varekamp, J.C.**, An Analog Earth Climate Model. AGU, fall meeting, December 2010, **ED33A-0710**
- Warren, C.E., **J. C. Varekamp**, E. Thomas, Long Island Sound Water Temperatures During the Last Two Thousand Years. AGU, fall meeting, December 2010, **PP43B-1698**.
- Varekamp, J.C.**, T. Kading, Acid fluids from Copahue Volcano, Argentina, and their environmental effects. AGU, fall meeting, December 2010, **V23A-2389**.

## INVITED TALKS

- 1980: Mercury anomalies in geothermal areas in the Cascades. U.S. Geol. Survey Cascadia meeting, Menlo Park, California.
- 1980: Mercury anomalies in the Lassen KGRA. U.S. Geol. Survey "Lassen Park geothermal investigators meeting", Menlo Park, California.
- 1982: The 1982 eruption of El Chichon volcano: Nature of the eruption, ash and volatiles. Amer. Geophys. Union, Fall meeting, San Francisco.
- 1983: Geochemistry of Hg. University of Connecticut, Avery Point, 16 September.
- 1983: Geochemistry of Hg in hydrothermal environments. University of Rhode Island, Narragansett, Rhode Island, 28 October.
- 1984: The 1982 eruption of El Chichon volcano. Eastern CT State Univ., 15 February.
- 1984: The 1982 eruption of El Chichon volcano. Univ. of Connecticut, February 23.
- 1984: Tectonic framework of potassic volcanism in central Italy. University of

- Connecticut, Storrs, CT, 23 February.
- 1986: Potassic volcanism in the Indonesian arc. Dutch Institute for Research at Sea (NIOZ), Texel, The Netherlands, 19 October.
- 1987: Target Earth 65 Ma BP. Dept. of Astronomy, Wesleyan University, Middletown, Connecticut, 4 March.
- 1987: Potassic volcanism in eastern Indonesia. Univ. of S-Florida, Tampa, FL, April 3.
- 1987: Plate-tectonic implications of Sunda/Banda arc magmatism. Int. Symp. Results of Snellius II exped., Jakarta, Indonesia, 24 November.
- 1988: Shallow evolution of calc-alkaline magma chambers. Brown University, Providence, Rhode Island, 25 October .
- 1989: The chemistry of volcanic gases: applications and techniques. Chemistry Seminar, Wesleyan University, 6 October.
- 1990: Punctuated sea level rise over the last 2000 years and correlation with paleo-climates. University of Connecticut, Avery Point, Connecticut, 6 April.
- 1991: Sea level rise and climate oscillations during the last 2000 years, Department of Earth Sciences, University of Cambridge, U.K, 30 January.
- 1991: Element recycling in the Indonesian arc magmas. CNR lab. Isotope Geochemistry, Pisa, Italy, 16 February.
- 1991: Sea level rise and climate oscillations during the last 2000 years. University of Florence, Italy, 20 February.
- 1991: Sea level rise and climate oscillations during the last 2000 years, Center for Global Change, Yale University, New Haven, CT, 21 April.
- 1991: Subduction-related ultrapotassic and associated volcanics: clues for multiple magma sources from Eastern Indonesia, EUG meeting, Strassbourg, France, 18 March.
- 1992: The geochemistry of the Keli Mutu crater lakes - Int. Working Group on Crater Lakes, Misasa, Japan, 21 October.
- 1992: The geochemistry of the Keli Mutu crater lakes - University of Rhode Island, 18 December.
- 1994: Sea level rise: the last 350 years. AGU fall meeting, Union Session.
- 1995: Element recycling in the Indonesian arc. Institute for the Study of the Earth Interior, Misasa, Japan, 15 February.
- 1995: Element recycling in the Indonesian arc. Geol. Survey of Japan, Tsukuba, 25 April.
- 1996: Hephaistos messengers: volatiles and volcanic processes. USGS workshop of Volcano Hazards group, Vancouver WA, 14 May.
- 1996: Where Hades meets Apollo. Intro-speech, Chapman Conf. Crater Lake, OR, September 4-9.
- 1997: Global weathering budgets. Univ. Rhode Island, 7 October.
- 1998: Crater lakes. American Museum of Natural History, NY, February
- 1998: Crater lakes. Earth & Env. Sciences, Univ. of Rochester, NY, March
- 1998: Crater lakes, Earth Sciences, SUNY, Stony Brook, 22 October
- 1999: Sea Level Rise, GISS/ Columbia University LDEO, 9 April

- 1999: Rates of relative sea level rise along Long Island Sound, GSA NE meeting, Providence, March 22
- 1999: Relative sea level rise along the NE USA seaboard, AGU spring meeting, Boston, May 7
- 1999: Looking for life in all the wrong places - acid crater lakes harboring life? Univ. Connecticut, Dept. of Marine Sciences, 29 September
- 1999: The environmental record of coastal salt marshes - MENSA meeting, 16 October
- 1999: Coastal salt marshes as environmental archives. Comahue Univ., Neuquen, Argentina
- 2000: Fault motions along the eastern border fault, Hartford Basin, CT over the last 2800 years. AGU spring meeting, Washington DC.
- 2000: Mercury in sediments from Long Island Sound. AGU spring, Washington DC.
- 2000: Acid fluids IAVCEI meeting, Bali, July 2000.
- 2000: Salt marsh sequences as environmental archives: sea level, contamination and land movements. University of Delaware, 14 September
- 2000: Salt marsh sequences as environmental archives: sea level, contamination and land movements. New York State University of Stony Brook, 6 October
- 2000: Environmental change in Long Island Sound over the last 35 years. GSA annual meeting, Reno NV
- 2001: The State of the Sound, EPA / Save the Sound meeting, NY Botanical Garden, NY, March 2001
- 2001: Shallow magmatic degassing into the hydrothermal system of Copahue, Argentina, AGU spring meeting, Boston, May
- 2001: Environmental Change in Long Island Sound: climate change and eutrophication. 2<sup>o</sup> LIS Lobster Health Symposium, November 29-30 2001, Ronkonkoma, NY.
- 2002: The historical record of water quality in LIS. Long Island Sound workshop, Batelle laboratories, March 6-7, Groton CT
- 2002: Crater lakes as windows in magma chambers, Azores Second International Conference on the Volcanology of Pico Island, Azores. 18 April
- 2002: Volatile element fluxes at Copahue Volcano, Argentina. AGU spring meeting, May 28, Washington DC.
- 2002: Degassing at an active hydrothermal system, Copahue, Argentina. Goldschmidt conference, 26 August, Davos, Switzerland
- 2002: Lake contamination: models for evolution towards steady state. Conference on Residence Times in Lakes, Bolsena, Italy, 28 September
- 2003: Crater lakes: coloured windows in arc volcanoes. Duke University, Durham NC, 21 February
- 2003: Paleoenvironmental history of Long Island Sound. SMAST, University of Massachusetts, New Bedford MA, March 26
- 2003: Once Spilled – Still Found – metal pollution in sediments from Long Island Sound and its coastal wetlands. Connecticut College, Groton CT, Conference on “Our Changing Coast”, March 29
- 2004: Long Island Sound and the rising tides. Mystic village lecturer in Environmental

- studies, Stamford, September
- 2004: Nitrogen fluxes in Long Island Sound. EPA citizens committee, Stamford CT, Nov.
- 2005: Project Oceanology – keynote speaker at the annual SENEMA meeting, Avery Point CT – *Human impacts on Long island Sound*, October 15
- 2005: Speaker at the NSTA Regional Meeting, Hartford, CT, *Mercury pollution*, Oct. 20
- 2005: AGU-featured speaker (with Ellen Thomas) at the NSTA regional meeting, Hartford CT ‘*LIS environmental history*’, October 21
- 2005: Mercury pollution in Connecticut: from mad hatters to environmental policies. Public Science lecture, Wesleyan University, September 29
- 2006: *Crater lakes, coloured windows into arc volcanoes* – Department of Geology, Cornell University, Ithaca, NY, February 8
- 2006: Opening speaker (*The Salt of the Earth*) at a retirement Symposium of Prof. M. Kusakabe, Misasa, Japan, February 29
- 2006: Keynote speaker (with Ellen Thomas) at the CT Climate Summit (*Global climate change and its impacts on Long Island Sound*), CFE-Save the Sound, Bridgeport, CT, April 8
- 2006: Keynote speaker at the New England Science Centers collaborative, *Global Climate Change*, Maritime Aquarium, Norwalk, April 24
- 2006: *The history of Long Island Sound: From Native Americans, European Colonist To Modern Day LIS*, Department of Environmental Studies, Southern CT State University, New Haven, CT, April 26
- 2006: Keynote speaker, Annual Meeting of the Northeastern Association of Wastewater Treatment Plant Operators, Environmental History of Long Island Sound, Mystic, CT, June 5
- 2006: Climate change – talk for church leaders, June 24 Mercie Center, Madison CT
- 2006: Acid fluids from Copahue volcano. Keynote address at 7<sup>th</sup> international meeting of ISEG, Beijing, China, September 18.
- 2006: Climate Change and Long Island Sound, Annual Global Change Symposium, Manchester Community College, October 19, Manchester CT
- 2006: LIS Environmental History, ISIS program, Southern Connecticut State University, November 20. New Haven CT.
- 2006: Where beavers meet climate change – CSS, Wesleyan University, November 29
- 2007: Dutch colonial history and climate change. Hartford Rotary Club, January 29
- 2007: Water riddles – Audubon CT, Glastonbury, February 7, 2007
- 2007: Volatiles at El Chichon: ashes, fumaroles and crater lakes – El Chichon 25<sup>th</sup> Anniversary meeting, March 22, San Cristobal, Mexico.
- 2007: Crater lakes and natural acid fluids, Central Michigan State University, Mount Pleasant, MI, April 20 .
- 2007: Paleoenvironments of LIS – where beavers meet climate change – UConn, Avery Point, CT May 11
- 2007: Human impact on Long Island Sound. Environmental Sciences Rutgers University, Newark, N.J., October 5.
- 2007: Copahue/Caviahue volcano and its backarc basalts, N-Patagonia, Argentina – scale

- of mantle contamination with subduction fluids. AMNH, NYC, NY, October 23.
- 2008: Paleoenvironmental studies of Long Island Sound. Univ of South Carolina, Columbia, SC. February, 2008.
- 2008: Paleoenvironmental studies of Long Island Sound. Marine Biology Laboratories, Woods Hole, MA, February 26
- 2008: Measuring and modeling climate change. Conference on climate change, Univ of Hartford, March 30
- 2008: Adriaen Block and the history of Long Island Sound. New York Map Society meeting, NY Public Library, April 13
- 2008: Measuring and modeling climate change, Schuman Symposium 'where on earth are we going'? April 26, Wesleyan University
- 2008: Sea level rise in Long Island Sound, Madison CT, May 16.
- 2008: The early history of Long Island Sound, the 'American Black Sea'. June 6, AMQUA meeting, PennState University
- 2008: Crater lakes – coloured windows into volcanoes. Western Connecticut State University, October 23
- 2009: Volcanic Lakes: **Smith College**, Northampton, MA, February 19
- 2009: Mercury Geochemistry in CT and LIS, **Mont Clair State University**, Mont Clair, N.J., April 7
- 2009: Paleo-environmental history of LIS, **Connecticut Agricultural Experiment Station**, New Haven CT, May 12
- 2009: Dutch Colonial History in Connecticut and New York state – featured speaker during the 'Hudson Days', **Holland Society**, November 11, NYC, NY
- 2009: Two presentations on "Crater lakes" and "Nisyros island Petrology" at the Department of Geological Sciences, **University of Oregon** (October 7/October 8)
- 2009 "Climate Change", Geology club, **University of Oregon** (12/7/ 2009)
- 2010: The Iodine cycle – from seaweed to fumarole. Speaker at retirement symposium for Dr. Udo Fehn, E&ES, **University of Rochester**, NY (June 2010).
- 2010: From furs to forams: the environmental history of LIS, **RPI**, Troy, New York (October 16, 2010)

### **Teaching Record:**

- Mineralogy + lab. (1983-2010)
- Petrology + lab. (1983, 1989)
- Earth in Space (co-taught with Bill Herbst, AST, 1986,1988)
- Environmental Geochemistry (1983-2002)
- Isotope Geochemistry (1987, 1992)
- Energy, Mineral and Water Resources (1983-1992)
- Environmental Issues (1985)
- Intro to Global Change (1990)
- Global Change (1994)
- Geochemical Techniques (1991, 1996)
- Volcanology (1996, 2004, 2008)

Earth System Science (1997, 1998)  
Introduction to Environmental Science (1998, 2001, 2002, 2006, 2007)  
CO<sub>2</sub> (FYI course, 2000)  
Climate Change, and the role of CO<sub>2</sub> (2002, 2008)  
Senior Seminar (with Phil Resor) 2006/2007  
Intro to Volcanology – 2007

**Tutorial, research and senior thesis undergraduate students, 1991-2002:**

1991-1992 Heather Schwartz (Amherst College, NECUSE project student)  
Stephen Scholand (thesis research, University major, High Honors)

1992-1993 Erica Gasper, Colleen Sanders, Allison Bidwell, John Pasch (marsh studies)  
Joy Roth (research tutorial), Koren Nydick (thesis research, Dept. Honors)  
Gregory Pasternack (thesis research, Dept. High Honors, University Honors)

1993-1994 John Crockett, Leslie Katz, Mark Sughrue, Sarah Cassell, Sarah Yuhas  
(summer research), Shelby Walker, Joseph Stein (research tutorials)  
Allison Bidwell (thesis research, Dept. High Honors, University Honors)  
Rita Setser (thesis research), Jany Jacobs (thesis research)

1994-1995 Sarah Yuhas, Leslie Katz, Mark Sughrue (independent research)

1995-1996 John Crockett, Heather Saffert (thesis research), Oliver Stockhammer,  
Courtney Dowrick (independent research)

1996-1997 Bart Kreulen, Gari Mayberri, Bill Thompson, Scott Herman (ind. research),  
1997-1998 Kiran Haithcock (summer research), Claire Hruby (BA thesis, volcanology),  
Scott Herman (BA thesis, hydrogeochemistry), Bill Thompson (BA/MA  
thesis, marsh development), Bart Kreulen (MA thesis, Hg pollution), Eric  
Haskins (research student, volcanology), Julia Lynton (research student, Hg  
pollution), Alex Handler (research student, marsh development), Stephany  
Kuhn (Wittier College, summer research student), Polina Rabinowich  
(summer research student), Kathy Meigs (research student, ion  
chromatography); Andy Ouimette (mineralogy), Joshua Koch and Jaime  
Naugele (both Hg geochemistry)

1999-2000 Kathy Meigs (thesis student), Joshua Koch (Hg geochemistry, Ca/Sr studies),  
Brynn Bemis (metal pollution), Scott Herman (Hg pollution), Bill Thompson  
(marsh studies), Bart Kreulen (Hg studies), Andy Ouimette (Argentine river)  
Eli Fierer (Hg studies), Kate Lauriat (Hg pollution), Adam Goss (petrology),  
Janna Shackerof, Ryan Huggins, Irina Abramson, Polina Rabinovich (LIS).

2000-2001 Adam Goss, Gabe Landes (Copahue volcano), Kate Lauriat (Hg pollution)

2001-2002 Adam Goss, Gabe Landes (Copahue volcano), Beth Goldoff, Dan Clark (Hg  
pollution), Jill Johnson, Amanda Long (Long Island Sound studies)

2002-2003 Matt Merrill, Maarten deMoor (petrology, Argentina), Kathryn Flynn,  
Rebecca Milburn (hydrothermal fluids, Argentina), Intan Nurhati, Joe Welsh  
(Biogenic Silica studies, LIS), Patrick Welsh and Billo Jallow (Hg studies)

2003-2004 Evan Browne, Maya Groner (volcanic lakes, LIS), Nathan Andersen, Anna  
Colvin (Biogenic Silica in LIS), Patrick Welsh, Rachel Bronsther (Hg in CT),

- Amy Gomberg (Composition of rivers in Chili), Jessica Pfund (Composition of the Pequabuck River in CT)
- 2004 Nathan Andersen, Elisabeth Cuckor (LIS), Sarah Weigle (Argentina),
- 2005 Chris Carmageon, Ion chromatography analyses, Craig Thomas, LIS water analyses, Nathan Boon – gamma ray spectroscopy
- 2006 Rachel Bleshman (Hg analyses), Marie Brophy (water analyses Argentina), Emily Doyle (water analyses Copahue volcano), Asia Neupane (Hg analyses of plants, hair), Marc Mckay (water analyses Domuyo volcano, Argentina)
- 2007 Asia Neupane, Hg research on plants, Nathan Boon – waste water fluids in LIS, Astrid Hesse – Cinder cones in Patagonia, Tom Wohlford – Arc volcanism in Greece. Marie Brophy – acid rivers from Copahue
- 2008 James Rea - Callaqui volcano in Chile; Jim Zareski – cinder cones in Patagonia; Tristan Kading – Hg and As in Copahue fluids, Asia Neupane, - Mercury on Tobago Island, Rachel Neurath (Smith College) - Mercury on Block island, Conor Veeneman - Sea level rise in Block Island Sound.
- 2009 Emma Kravet – sea level rise on Block island, RI.

## Thesis Advising

### BA theses

1. **McCready\*, D. J.**, 1984, Low temperature geochemistry of estuarine sediments. p. 93. (Varekamp), Honors, (Environmental Lawyer, Seattle, Washington).
2. **Brooks, J. T.**, 1985, Distribution and chemistry of heavy metals in sediments from the Connecticut River estuary. p. 104. (Varekamp), Honors (MD, Harvard Medical School, MA).
3. **Limburg\*, E. M.**, 1986, Young pyroclastics on Nisyros, Greece: Physical studies. P. 119 (Varekamp), Honors (MS volcanology, New Mexico Tech., Socorro, NM, self employed artist).
4. **Wyman\*, S.L.**, 1986, The petrology of pumices from Nisyros Island, Greece. p. 120, (Varekamp) credit, (Env. Consultant, Washington State).
5. **Gee\*, A. K.**, 1986, Heavy metals in the Connecticut River estuary: analysis and questions of approach. p. 181 (Varekamp), Honors, (postdoctoral fellow geochemistry, Georgia).
6. **Hardigg, N.**, 1990, Connecticut precipitation chemistry; 1989-1990, p.93. (Varekamp) Honors (MBA, Yale Univ., CEO, Denali State park, AK).
7. **Gansecki\*, C. A.**, 1991, Petrology of the domes and inclusions of Nisyros Volcano, Greece. P. 97 (Gutmann and Varekamp), High Honors (PhD, volcanology, Stanford University, CA, Research scientist and volcano moviemaker, Univ. Hawaii, Hilo)
8. **Scholand, S. J.**, 1992, Salt marsh geochemical records and paleoenvironmental change. p. 160 (Varekamp). High Honors (MD, George Washington University, DC, now MD in Connecticut).
9. **Pasternack, G. B.**, 1993, Acid brine crater lake systematics: a case study. p. 159 (Varekamp), High Honors, University Honors (MS UC Berkeley, PhD, Johns Hopkins, Hydrology, Full Professor Land Air Water Sciences, UC Davis, CA).
10. **Nydick\*, K. R.**, 1993, Guilford salt marsh evolution and relative sea level rise. p. 141, (Varekamp and Thomas), High Honors (PhD Colorado State University, Post doc at Utah State University, freshwater ecology, now Director of Research, Mountain Studies Institute, Colorado).
11. **Bidwell\*, A. B.**, 1994, The evolution of the Dennis creek salt marsh under the influence of rising relative sea level. p. 143 (Varekamp and Thomas), High Honors, University Honors (PhD Envir. Studies, Stanford University, CA, 2005, now in DC).
12. **Jacob\*, J.**, 1995, Barn Island salt marsh evolution and relative sea level rise. p. 172. (Varekamp and Thomas) credit (self employed).
13. **Crockett, J. S.**, 1996, Mercury in Connecticut marshes. p.86. (Varekamp) Honors (PhD geochemistry, 2006, University of Washington, Seattle, WA, self employed).
14. **Setser\*, L.** 1997, Petrology of ignimbrites near Liberia, Costa Rica. P. 96, credit (MS student, Geography, Univ. of Texas in Austin).
15. **Herman, S.W.**, 1998, The Hydrogeochemistry of Copahue Volcano, Argentina. p.94 (Varekamp) - High Honors (ODP technician, MA Structural Geology UC Santa Barbara, CA, now with Rio Tinto Ore Inc).

16. **Hruby\***, **C.E.**, 1998, Magma Genesis at Nisyros and Santorini Volcanoes, Aegean Arc, Greece. p.106 (de Boer + Varekamp), Honors (PhD hydrology, Univ. of Iowa)
17. **Meigs\***, **K. W.**, 1999, A comparative case study of the historical record of trace metal contamination in Connecticut salt marshes. p.143 (Varekamp), Honors (Env. Consultant).
18. **Goss, A.R.**, 2001, Magmatic Evolution of Volcán Copahue, Neuquen, Argentina. p.209. (Varekamp), High Honors. University Honors (PhD Volcanology/Petrology, Cornell University, Ithaca NY, 2007; postdoctoral fellow, Univ of Florida).
19. **Lauriat\***, **K. A.**, 2001, Mercury contamination in the Housatonic river Basin: the Danbury hatting heritage. p. 153. (Varekamp), Honors (Env. Consultant-2006, Boston University, MA studies in dietary science)
20. **Goldoff\***, **B.**, 2002, The Danbury hatting industry: a source of Mercury for the Still River Basin and Long Island Sound. (Varekamp), Honors, Research associate, American Museum of Natural History, NY.
21. **Flynn\***, **K.**, 2003, The effect of the 2000 eruption on the composition of the Volcan Copahue hydrothermal system p. 77. (Varekamp), Honors. (USGS, Menlo Park, CA, MA candidate, UC Davis, ore geochemistry)
22. **Merrill, M.**, 2003, Petrogenesis of the Caviahue caldera: Neuquen, Argentina. p. 165. (Varekamp) Honors (MA student, Wesleyan University), research scientist USGS, energy group, Reston VI.
23. **DeMoor, M.**, 2003, The magmatic evolution of Caviahue caldera volcanic rocks: Implications for subduction processes and caldera formation. p. 205. (Varekamp), High Honors (MA volcanology, Univ. New Mexico, 2006), Ore industry geologist, PhD candidate at University of New Mexico.
24. **Bronsther\***, **R.** 2004, Mercury contamination in western Connecticut: how much is dangerous? Honors in General Studies. Medical School
25. **Colvin\***, **A.**, 2004, The Riscos Bayos ignimbrites, Caviahue, Argentina. Honors. USGS, Reston, VI, MA, MTU, Volcanology+ remote sensing, GeoGlobal Geothermal Consulting.
26. **Groner\***, **M.**, 2004, The carbon cycle in Long Island Sound: radiocarbon studies of carbonates. Credit. Univ of Pittsburgh, PhD candidate Ecology
27. **Andersen, N.**, 2005, The eutrophication history of Long Island Sound. High Honors. Envir. Consultant
28. **Rea, James**, 2009, The petrology of Callaqui volcano, Chile, High Honors, USGS intern for fall 2009.
29. **Veeneman, Conor**, 2009, Paleoenvironmental evolution of Block island, RI (co-advised by Ellen Thomas), Credit.
30. **Kravet\***, **Emma**, 2009, Sea level rise on Block island, the last 300 years (Ellen Thomas main advisor) Honors, teaches environmental science in California
31. **Navi Sprudat**, 2011, Hg in hair, fish and mud in Chile, in progress
32. **Snelling\***, **Rebecca**, 2012, The Talcott basalt of the AIP. in progress
33. **Lefkowitz, Jared**, 2012, The crater lakes at Newberry caldera, OR, in progress

### **Masters Theses**

1. **Lodise\*, L.**, 1987, Petrology of Nisyros volcano, Greece, p. 367 (Varekamp)
2. **Manoukian\*, N.**, 1995, How coastal marshes grow: accretion rate analyses and numerical simulations. p. 186 (Varekamp & Thomas), MBA Sorbonne, Paris, Envir. Consultant, UK.
3. **Kreulen, B.**, 1999, Mercury pollution in and around Long Island Sound. p.176. (Varekamp), research scientist in industry, The Netherlands.
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