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Work Address

University of South Florida

E-Mail:

University of South Florida, Department of Geology
Laboratory Manager for the Center for Geochemical Analysis.
<http://facilities.cas.usf.edu/geoanalysis/>

- 2000- 2015** **Adjunct Professor of Oceanography**
Miami Dade College, Virtual College
- 2004-2007** **Adjunct Professor**
University of Miami, Department of Geological Sciences
- 2001-2007** **Graduate Instructor**
University of Miami, Department of Geological Sciences
- 1998-2001** **Graduate Instructor**
Florida International University, Department of Geology
- 1996-1998** **Research Assistant**
Florida International University, Southeast Environmental
Research Center

PUBLICATIONS

- Lago, J. L., Burcar, B. T., Hud, N. V., Febrian, R., Mehta, C., Bracher, P. J., **Atlas, Z.D.** & Pasek, M. A. (2020). The Prebiotic Provenance of Semi-Aqueous Solvents. *Origins of life and evolution of the biosphere: the journal of the International Society for the Study of the Origin of Life*.
- Banerjee, M., Dutta, U., Anand, R.. & **Atlas, Z. D.** (2019). Insight on the process of two-stage coronae formation at olivine-plagioclase contact in mafic dyke from Palghat Cauvery Shear Zone, southern India. *Journal of Mineralogy and Petrology*.
<https://doi.org/10.1007/s00710-019-00674-y>
- Hersch, B., Chang, S. J., Blake, R., Lepland, A., Abbott-Lyon, H., Sampson, J., **Atlas, Z.**, Kee, T.P. & Pasek, M. A. (2018). Archean phosphorus liberation induced by iron redox geochemistry. *Nature Communications*.
- Binder, G. A., Daniel, K. Metcalf, R. & **Atlas, Z. D.**, (2018) Evaluation of Digestion Methods for Analysis of Trace Metals in Mammalian Tissues and NIST 1577c. *Analytical Biochemistry: Methods in the Biological Sciences*.
- Macorps, E., Charbonnier, S., Varley, N., Capra, L., **Atlas, Z.D.** & Cabré, J. (2018). Stratigraphy, Sedimentology and Inferred Flow Dynamics from the July 2015 Block-and-Ash Flow Deposits at Volcán de Colima, Mexico, *Journal of*

- Mazza, S.E. & De Vivo, B. (2016). Contrasting sediment melt and fluid signatures for magma components in the Aeolian Arc: Implications for numerical modeling of subduction systems. *Geochemistry, Geophysics, Geosystems*. DOI: 10.1002/2016GC006301
- Pasek, M.A., Sampson, J. & **Atlas, Z. D.** (2014). Redox chemistry in the phosphorus biogeochemical cycle. *Proceedings of the National Academy of Science*. Early Edition doi:10.1073/pnas.1408134111
- Kee, T. P., Bryant, D. E., Herschy, B., Marriott, K. E. R., Nichola E. Cosgrove, N. E., Pasek, M. A., **Atlas, Z. D.** & Cousins, C. R. (2013). Phosphate Activation via Reduced Oxidation State Phosphorus (P): Mild Routes to Condensed-P Energy Currency Molecules. *Life*, 3, 386-402; doi: 10.3390/life/3030386
- Pasek, M. A., Harnmeijer, J. P., Buick, R., Gull, M. & **Atlas, Z. D.** (2013). Evidence for reactive phosphorus species in the early Archean ocean. *Proceedings of the National Academy of Science*, 110 (25) 10089-10094, doi:10.1073/pnas.1303904110
- Atlas, Z. D.**, Dixon, J. E. Finny, M., Sen, G. & Del Pozzo, A. L. (2006). Melt inclusions from Volcán Popocatepetl and Volcán de Colima, Mexico: melt evolution due to crystallization under vapor-saturated conditions during ascent. *Journal of Volcanology and Geothermal Research*, 153, 221-240.
- Rehki, S., Saxena, S. K., **Atlas, Z. D.** & Hu, J. (2000). The effect of particle size on the compressibility of MgO. *Solid State Communications*, 117 (1), 33-36

ABSTRACTS

- Germa, A., Koebli, D. J., **Atlas, Z. D.**, Wetmore, P., Diez, M., Savov, I. P., & Connor, C. (2020). Crystallization, segregation, and remobilization of evolved melts in shallow sills: insights from the San Rafael subvolcanic field, Utah. In

- Atlas, Z.D.,** Germa, A. & Boss, B. (2017). Magmatic Signatures And Sediment Enrichment Sources Along The Modern Caribbean Volcanic Arc. 2017 AGU Abstracts with Programs.
- Nicke, B. **Atlas, Z.D.** (2017). Petrographic and trace element geochemistry of rocks dredged from the Aves Ridge: examples of mixed basalt signatures. 2017 AGU Abstracts with Programs
- Koelbi, D. Germa, A., **Atlas, Z.D.** & Wetmore, P. (2017) A Geochemical and Petrological Investigation of dikes and sills from the San Rafael Volcanic Field, Utah. Session:II.07 Architecture of magmatic plumbing systems, IAVCEI2017
- Atlas, Z.D.,** Long, E., Macorps, E. Garcia Hernandez, M.A. Charbonnier, S & Varley, N. (2016). Geochemistry of the July 2015 pyroclastic flow at Volcán de Colima. 2016 AGU Abstracts with Programs
- Sanatan, K., J.G. Ryan, **Z. Atlas,** and M. Reagan (2016) Characterizing slab inputs in the earliest stages of subduction: preliminary evidence from fluid-mobile element systematics for IODP Expedition 352 recovered volcanic samples. Geophysical Research Abstracts, vol. 18, EGU2016-11483.
- Sumer, J., Peshek, C. **Atlas, Z.,** Long, E., Macorps, E., Charbonnier S. & Varley, N. (2016) Petrological investigation of 1999-2015 volcanics from Volcán de Colima, 2016 AGU Abstracts with Programs
- Macorps, E., Charbonnier S., Varley, N., **Atlas, Z.** (2016). Field investigations of the July 2015 pyroclastic density current deposits of Volcán de Colima, Mexico 2016 AGU Abstracts with Programs.
- Atlas, Z. D.,** Pasek, M. A.& Sampson, J. (2015) Phosphorus speciation by coupled HPLC-ICPMS: low level determination of reduced phosphorus in natural materials. European Geophysical Union, Spring Meeting
- Sampson, J. Pasek, M. A., **Atlas, Z. D.** & Buick, R. (2014). Impact delivery of reduced phosphorus in the Archean. GSA Annual Meeting 2014, Paper no. 32-3.
- Atlas, Z. D.,** Pasek, M. A.& Sampson, J. (2014) Speciation of Phosphorus by coupled HPLC-ICPMS: Application for quantification of reduced forms of phosphorus in rocks and natural waters. 2014 AGU Abstracts with Programs.

Atlas, Z. D., Germa, A., Kaufmann, B. & Ryan, J.G (2013). Comparison of magma sources in the modern caribbean volcanic arc to sediment enrichment sources in the central american arc. Geological Society of America, Southeastern Conferecne, Spring Meeting

Atlas, Z. D., Ryan, J.G., & Dixon, J. E. (2011). Multi-stage degassing and volatile flux at Masaya Volcano, Nicaragua. European Geophysical Union, Spring Meeting

Joseph M. L., **Atlas Z.D.**, Royall D., Pasek M. A. (2011). Geochemical Analysis of a Type II Fulgurite. 73rd Annual Meteoritical Society Meeting, #5197.

Pasek M.A., Collins, G.S., Carter, E.A., Melosh, H.J. & **Atlas, Z.D.** (2010) Shocked Quartz in a Fulgurite. 73rd Annual Meteoritical Society Meeting, #5197.

Pasek M.A., Kee, T.P., Carter, E.A., Edwards, H.G.M. & **Atlas, Z.D.** (2010). Fried Phosphate and Organic Survival: Lightning in Biogeochemical Cycles. LPI Contribution No. 1538, p.5261

Miyoshi, M., Hasenaka, T., Ryan, J.G., **Atlas, Z.D.**, Shimono, M. and Sano, T. (2008). Boron and trace element systematics of Quaternary basaltic rocks from Kyushu, Southwestern Japan. American Geophysical Union, Fall Meeting 2008, abstract #V31A-2117.

Atlas, Z. D., Dixon, J. E. Finny, M., Sen, G. & Del Pozzo, A. L. (2006). Melt inclusions from Volcán Popocatepetl and Volcán de Colima, Mexico: melt evolution due to crystallization under vapor-saturated conditions during ascent. Journal of Volcanology and Geothermal Research, 153, 221-240.

Atlas, Z.D. & Dixon, J.E. (2006). Interconnected magmatic conduit systems as recorded by melt inclusions from Masaya and Apoyo Calderas, Nicaragua. American geophysical Union Annual Meeting – Dec. 2006, San Francisco California Dec6 Tw 4.c[(D)2 (e)4u (r

Atlas, Z.D., Beasley, T. & Sen, G. (2001). Effects of Beam Size on Sodium Loss During Microprobe Analysis of Silicate Glass. Annual Meeting of the Microscopy Society – Aug. 2001 University of Central Florida, Orlando Florida.

Atlas, Z.D. & Sen, G. (2000). Melt inclusions in plagioclase from Volcán de Colima, Mexico: tracking the magmatic evolution of an andesitic volcano. VII International Conference on Volcan Colima – 2000 University of Colima, Colima Mexico:

WORKBOOKS

Atlas, Z. D. (2000). CNN Physical Geology Today. Workbook Vol. 3. Brooks Cole Publishing, N.Y.

REPORTS

Meeder, J. F., Ross, M. S., **Atlas, Z. D.** & Jacharanda, J. (1998). Soil chronostratigraphy and paleoecology. Report: South Florida water Management District.

DIRECT GRANT FUNDING

December 2018 - USF Strategic Investment Pool Grants Program. **Atlas, Z.D.,** Ryan, J.G., Germa, A., Onac, P. & Menicucci, A. Acquisition of Nexion 2000 ICP-MS with coupled Prep FAST IC system for inline dilution and speciation. **\$243,991.** Funded through carry forward grant

December 2018 – USF Strategic Investment Pool Grants Program. Pasek, M. A., Garey, J. Rains, M., Atlas, Z. D. & Rains, K. C. - Acquisition of Ion Chromatograph Spectrometer. **\$50,932.** Funded through carry forward grant

May 2018 – USF Equipment Acquisition Improvement Grant – **Atlas, Z.D.,** Ryan, J.G., Germa, A. & Wells, E.C. Acquisition of Inductively Coupled Plasma instrumentation for elemental analysis. - **\$122,915.** Funded

2017-2018 – USF Women’s Health Collaborative Grant – Ho, T., Groer, M, Alman, A, **Atlas, Z.D.,** Maheshwari, A. & Rico, J.F. Impact of enteral iron availability on intestinal microbiome and inflammation in premature infants. - **\$14,959.53**

January 2017 – IODP Early Career Workshop for development of pre and full drilling proposals – Austin Texas - **Atlas, Z.D.** - **\$1,500** participant grant.

September 2015 -

Analysis of Spanish Moss used as an monitor of urban air pollution. Alkandari, Y. – \$10,500 (pending)

Analysis of toxic elements in infant formula. Bourgeois, M & Martin, N. – \$540

Analysis of serpentinites and associated rocks from IODP expedition 366 to the Mariana Forearc. Johnson, R. & Ryan, J. – \$4,350

Analysis of sediments and associated rocks from IODP expedition 367-368 to the South China Sea. Luna, A. & Ryan, J. – \$4,975

Analysis lithium and major elements in igneous rocks from Iceland and the South China Sea. Maruszczak, A. & Ryan, J. – \$2,350

Analysis of igneous rocks for GLY 3311c (Mineralogy & Petrology). Ryan, J. – \$325

Analysis of Arsenic in metal organic frameworks. Verma, G. & Ma, S. – \$550

Analysis of trace elements and anion groups in Florida groundwater. Rains, M. – \$2,145

Analysis of treated groundwater passed through columns containing sulfide minerals. Sutton, J & Ergas S. - \$300

Forensic Soil analysis for the Hillsborough County Sherriff's Office. – \$250

Laser ablation ICP analysis of carbonate shell matter. Al-Qattan, N. & Herbert, G. – \$3,100

Analysis of Ca and P in experimental extracts. Lago, J. & Pasek, M. – \$2,000

Analysis major elements in South China Sea igneous rocks. Maruszczak, A. & Ryan, J. – \$3,050

Ultra-trace element analysis of ice samples from the El Malpais lava tubes. Onac, B. - \$1,750

Elemental analysis of archeological soil samples from Guatemala. Wells, E. C. – \$16,685

Preliminary analysis of Infant Meconium. – Ho, T. \$250

Trace elements analysis of mineral and organic material. Germa, A. – \$250

Analysis of cation ratios of metal organic frameworks. Ma, S. & Aguillar, B. – \$4,000

Preliminary analysis of animal and human tissues for Cu/Zn ratio and other trace metals. DanielsBK., Guida, W., Atlas, Z. and Binder, G. –

E

HPLC-ICP-MS analysis of reduce phosphates in urine for the U.S. Federal Bureau of Investigation and Centers For Disease Control. Agt. Young & Dr. Schwartz, M. – \$700

Analysis of forensic soil samples and water for the Tampa Police Department – \$405

Water analysis via ICP-OES for major dissolved ions. Phillips, P. & Wells, E. C. – \$1000

Preliminary analysis of experimental water and sludge treatment Trotz, M. – \$250

Trace and ultra-trace analysis of bat guano from Texas & Romania for Babes-Bolyai University, Cluj. Forray, F. – \$1,900

Major cations in brackish waters from Florida springs and estuaries. Menning, D. & Geary, J. – \$1,500

Analysis of saline and brackish waters via ICP-MS. Trotz, M. – \$1,525

Analysis of trace elements and anion groups in Alaskan ground and surface waters. Rains, M., Callahan, M. & – \$2,622

Preliminary analysis for the Department of Physics at USF. Phan, M-H & Devkota. – \$250

Soil extract analysis of archeologic samples from Central America. Wells, E. C. – \$22,860

Metals analysis in bio-fuels. Pandey, M & Borgman, D. – \$448

Wet deposition metals analysis for the Department of Public Health, Michaels, R. & Stuart, A. – \$500

Iron oxide, gadolinium and manganese analysis from the USF Morsani College of Medicine. Mohapatra, S. Alwarappen, S., Dixit, S. & Howell, M. – \$750

Sample analysis of the Corrosion Engineering Laboratory. Sagues, A. Akhoondan, M. – \$375

Selenium analysis in Blood Plasma from South American individuals. USF Microbiology lab. Rivera, F. & Malavade. – \$700

ICP-MS and ICP-OES analysis of Ice and water from cave, Romania. Onac, B. – \$8,743

Porphyrin analysis. Larsen, R. & Vetromile, C. – \$250

Arctic Ocean sea water sample analysis for cations via ICP-OES. United States Geologic Survey, St. Petersburg Fl. Yates, K. – \$2,478

ICP-OES analysis of Fe Porphyrin. Zaworotko, M. Zhang, Z. & Ong, T. – \$700

Gold and Silver Nanoparticle analysis. Kumar, A. – \$250

Cation analysis of waters from Kachemak Bay Research Reserve Alaska. Walker, C. – \$750

Metals and water analysis for calibration of pXRF for anthropologic use on metal artifacts. Tykot, R. – \$1,550

Water analysis for the USF School of Architecture and Community Design. Russell, S. – \$625

Soil extract analysis for the College of Marine Science, Schwing, P. & Pyrtle, A. – \$750

ICP-MS analysis of cave drip water and corresponding carbonates from the Institute of Speleology, Romania. Tamas, T. – \$3,681

Analysis of metamorphic rocks for Jadavpur University, India. Sengupta, P. – \$2,250

Metals analysis for Dais Analytical Corp. – \$500

Ground and surface water analysis – Rains, M. – \$2,300

PAPERS, REPORTS, ABSTRACTS, THESES & DISSERTATIONS

As a direct result of both paid and pro-bono contract work via the center for Geochemical Analysis

2019

Journal Articles

M. Lamoureux-St-Hilaire, M. A. Canuto, E. C. Wells, C. Cagnato, and T. Barrientos (in press). A Multi-Proxy Approach to a Classic Maya Regal Palace Economy. *Geoarchaeology*.

2018

Journal Articles

- Binder, G. A., Daniel, K. Metcalf, R. & Atlas, Z. D., (2018) Evaluation of Digestion Methods for Analysis of Trace Metals in Mammalian Tissues and NIST 1577c. *Analytical Biochemistry: Methods in the Biological Sciences*.
- Herschy, B., Chang, S. J., Blake, R., Lepland, A., Abbott-Lyon, H., Sampson, J., Atlas, Z., Kee, T.P. & Pasek, M. A. (2018). Archean phosphorus liberation induced by iron redox geochemistry. *Nature Communications*.
- S. M. Pratt, E. C. Wells, and A. R. Tricarico (2018). The Landscape Legacies of Sugar and Rum: An Historical-Ecological Perspective from Betty's Hope. In *Plowing Paradise: The Historical Archaeology of Betty's Hope Plantation, Antigua*, edited by G. L. Fox. University Press of Florida, Gainesville, under review.
- Thorslund J, Cohen MJ, Jawitz JW, Destouni G, Creed IF, Rains MC, Badiou P, and Jarsjö J (2018) Solute evidence for hydrological connectivity of geographically isolated wetlands. *Land Degradation and Development* 29:3954-3962
- E. C. Wells, C. Goudge, A. R. Tricarico, R. Murphy, and G. L. Fox (2018). Social and Environmental Impacts of British Colonial Rum Production at Betty's Hope Plantation, Antigua. In *Archaeologies of the British Empire in Latin America*, edited by C. E. Orser. Springer, New York, under review.
- E. C. Wells, S. M. Pratt, G. L. Fox, P. E. Siegel, N. P. Dunning, and R. Murphy (2018). Plantation Soilscapes: Initial and Cumulative Impacts of Colonial Agriculture in Antigua, West Indies. In *The Environmental Legacies of Colonialism in the Northern Neotropics*, edited by D. Wallman, E. C. Wells, and I. Rivera-Collazo. Special issue of *Environmental Archaeology* 23(1):23-35.
- Bergmann, Christine L. "Elemental Analysis of Archaeological Bone Using pXRF and a Newly Deve

- Annual Meeting of the Society for American Archaeology, Washington, DC, April 11-15.
- Herbert, G. S., 2018. Early warning indicators of collapse in one of the last "pristine" oyster habitats in North America. American Malacological Society Annual Meeting, Abstracts with Program.
- Herbert, G. S., S. Hesterberg, T. Pluckhahn, 2018. Status of Big Bend oyster populations: the view from deep history. Oyster Integrated Mapping and Monitoring Program Workshop. May 22-23, 2018.
- Hayes, M. B., G. S. Herbert, and L. Tapanila, 2017. Helicoprion tooth whorls as paleothermometry proxies for the Permian Phosphoria Sea. 2017 GSA Annual Meeting, Abstracts with Program.
- West, K.J., and G. S. Herbert, 2017. Gastropod opercula as a trophic archive: new insights and results. Florida United Malacologists Annual Meeting, Abstracts with Program

2017

Journal Articles

- Aguila, B.; Sun, Q.; Perman, J. A.; Earl, L. D.; Abney, C. W.; Elzein, R.; Schlaf, R.; Ma, S. (2017). Efficient Mercury Capture Using Functionalized Porous Organic Polymer. *Adv. Mater.*, 1700665.

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Mafic-Ultramafic Complex, Western North Carolina. Presented at the National
Conference on Undergraduate Research, Asheville, NC.
Atlas, Z.D., Long, E., Maco

- L. D. Mihok and E. C. Wells (2014). Miskitu Labor and English Royalization at Augusta, Roatán Island, Honduras. *International Journal of Historical Archaeology* 18(1):100-121.
- E. C. Wells, K. L. Davis-Salazar, J. E. Moreno Cortés, G. S. L. Stuart, and A. C. Novotny (2014). Analysis of the Context and Contents of an Uti-style Marble Vase from the Palmarejo Valley, Honduras. *Latin American Antiquity* 25(1):82-100.
- Li, B., Zhang, Y., Ma, D., Shi, Z., & Ma, S. (2014). Mercury nano-trap for effective and efficient removal of mercury (II) from aqueous solution. *Nature communications*, 5, 5537.

Thesis & Dissertations

- Menning, Damian M., "Karst Estuaries: A newly described ecosystem governed by aquifer hydrology" (2014). Graduate Theses and Dissertations. <http://scholarcommons.usf.edu/etd/5382>

Abstracts & Presentations

- Atlas, Z. D., Pasek, M. A. & Sampson, J. (2014) Speciation of Phosphorus by coupled HPLC-ICPMS: Application for quantification of reduced forms of phosphorus in rocks and natural waters. 2014 AGU Abstracts with Programs.
- LaCruz, N, Pasek, M. A., Pirim, C., Sampson, J., Lindsay, D., Gull, M., Atlas, Z. D. & Orlando, T. M. (2014). Synthesis and corrosion of schreibersite and nickel phosphide and possible implications for origin of life. GSA Annual Meeting 2014, Paper no. 111-3.

2013

Journal Articles

- Kee, T. P., Bryant, D. E., Herschy, B., Marriot, K. E. R., Cosgrove, N. E., Pasek, M. A., Atlas, Z. D., & Cousins, C. R. (2013). Phosphate activation via reduced oxidation state phosphorus [P]. Mild routes to condensed-P energy currency molecules. *Life*, 3, 386-402, doi: 10.3390/life3030386.
- Pasek, M. A., Harnmeijer, J. P., Buick, R., Gull, M. & Atlas, Z. D. (2013). Evidence for reactive reduced phosphorus species in the early Archean ocean. *Proceedings of the National Academy of Science*, 110 (25), 10089-10094.
- Wang, X.-S., Chrzanowski, M., Wojtas, L., Chen, Y.-S., Ma, S (2013). Formation of a Metalloporphyrin-Based Nanoreactor by Post-Synthetic Metal-ion Exchange of a Polyhedral-Cage Containing Metal-Metalloporphyrin Framework. *Chem. Eur. J.* 2013, 19, 3297-3301.

Book Chapters

- E. C. Wells, K. L. Davis-Salazar, and D. D. Kuehn (2013). Soilscape Legacies: Historical and Emerging Consequences of Socioecological Interactions in Honduras. In *Soils, Climate, and Society: Archaeological Investigations in Ancient America*, edited by J. D. Wingard and S. E. Hayes, pp. 21-59. University Press of Colorado, Boulder.
- E. C. Wells (2013). Cultivated Landscapes as Inalienable Wealth in Southeastern Mesoamerica. In *The Inalienable in the Archaeology of Mesoamerica*, edited by B. Kovacevich and M. G. Callaghan, pp. 66-80. *Archeological Papers of the American Anthropological Association*, Volume 23. Wiley-Blackwell, New York.

Technical Manuscripts

- E. C. Wells and P. G. Phillips (2013). Chemical Characterization of Plaster Surfaces from the Palace Complex at Actuncan, Belize. Report submitted to Lisa J. LeCount, Department of Anthropology, University of Alabama, Tuscaloosa, Alabama.
- E. C. Wells (2013). Anthrosol Chemistry of Sediments from Douglas Lake, Eastern Tennessee. Report submitted to Meghan Howey, Dep

Wells, E.C. (2010). Multi-elemental Analysis of Soils from Inca-Caranqui, Ecuador. Reported submitted to Tamara Bray, Department of Anthropology, Wayne State University, Detroit, Michigan.

Wells, E.C. (2010). Chemical Study of Soils from a Copper Processing Workshop at El Coyote, Northwest Honduras. Report submitted to Patricia A. Urban, Department of Anthropology, Kenyon College, Gambier, Ohio.

Thesis & Dissertations

Kara A. Rothenberg. Multi-Elemental Chemical Analysis of Anthropogenic Soils as a Tool for Examining Spatial Use Patterns at Prehispanic Palmarejo, Northwest Honduras. MS Thesis, University of South Florida, Tampa, Florida.

Abstracts & Presentations

Callahan, M.K., J. Bellino, and M.C. Rains. 2010. Trends and controls on summer surface-water temperatures in salmonid-bearing headwater streams in two common geomorphic settings, Kenai Peninsula, Alaska. American Geophysical Union 2010 Fall Meeting, San Francisco, California.

Pasek M.A., Collins, G.S., Carter, E.A., Melosh, H.J. & Atlas, Z.D. (2010) Shocked Quartz in a Fulgurite. 73rd Annual Meteoritical Society Meeting, #5197.

Pasek M.A., Kee, T.P., Carter, E.A., Edwards, H.G.M. & Atlas, Z.D. (2010). Fried Phosphate and Organic Survival: Lightning in Biogeochemical Cycles. LPI Contribution No. 1538, p.5261

Rains, M.C., K. Murphy, N. Pechenik, M. Exner-Kittridge, M. Stewart. 2010. Hydrology of clay settling areas and surrounding landscapes in the phosphate mining district, peninsular Florida. 2010 Water Institute Symposium, Gainesville, Florida.

Rothenberg, K. A. & Wells, E. C. (2010). Using Soil Chemical Residue Analysis to Prospect for Ancient Activity Loci at the Prehispanic Site of Palmarejo, Northwest Honduras. Paper presented in the symposium, "Geoarchaeological Research," at the 75th Annual Meeting of the Society (o)-4 ()2 (on)4 (c)6 (tiv)2 (9 (t (vi)(y)5nb6.7)-

Walker, C., King, R., Rains, M. C., Whigham, D., Baird, S. & Bellino, J. (2009). Headwater Stream Wetland Settings and Shallow Ground Water Influence: Relationships to Juvenile Salmon Habitat on the Kenai Peninsula, Alaska. Prepared for the U.S. Environmental Protection Agency, Region 10.

Thesis & Dissertations

Bellino, J. (2009). Effects of Geomorphic Setting on Shallow-Groundwater Exchange and Water Temperature of Salmon-Bearing Headwater Streams of the Lower Kenai Peninsula, Alaska. MS Thesis, University of South Florida, Tampa, Florida.

Lindsey, M. (2009) Detailed stratigraphy and geochemistry of the lower Mount Rogers Formation metavolcanic units exposed on Elk Garden Ridge, VA. MS Thesis, University of South Florida, Tampa, Florida.

Abstracts & Presentations

Bohrer, D., Griffith, P., Surharski, K., Storer, D. A., Rothenberg, K. A. & Wells, E. C. (2009). Emission or Absorption? A Comparison of Spectroscopic and Colorimetric Methods for Characterizing Extractable Phosphate in Archaeological Soils. Poster presented at the 2009 Archaeological Sciences of the Americas Symposium, Tampa, Florida.

Lindsey, M. & Ryan, J. G. (2009). Detailed Stratigraphy and geochemistry of Lower Mount Rogers Formation metavolcanic units exposed on Elk Garden Ridge, Va. Geological Society of America Abstracts with Programs, Vol. 41, No. 1, p. 9.

Rains, M.C. 2009. Water sources and hydrodynamics of closed-basin depressions, south-central Alaska. Society of Wetland Scientists 2009 Annual Meeting, Madison, Wisconsin.

Rothenberg, K. A. & Wells, E. C. (2009). Soilscape Legacies of the Palmarejo Valley, Northwestern Honduras. Poster presented in the symposium, "Geoarchaeology and Interpretation," at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, Georgia.

Rothenberg, K. A., Storer, D. A. & Wells, E. C. (2009). Interlinking Soil Properties to Prospect for Ancient Activity Loci: An Example from Palmarejo, Honduras. Poster presented at the 2009 Archaeological Sciences of the Americas Symposium, Tampa, Florida.

Sliko, J. L., Herbert, G. S., DeLong, K. & LaVigne, M. (2009). Pliocene corals, rainfall, and El Nino teleconnections. Pliocene Climate Workshop, Bordeaux, France.

Sliko, J. L. & Herbert, G. S. (2009). Nutrient decline, rainfall patterns, and the end-Pliocene regional mass extinction in Florida. Geological Society of America, Annual Meeting, San Francisco, Ca.

Wells, E. C., Beeston, R. F. & Storer, D. A. (2009). Characterization in Shades of Blue: Archaeological Applications of Extractable Soil Phosphate using Molybdate Colorimetry and ICP-Emission Spectroscopy. Paper presented in the symposium, "Archaeometry," at the Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies, Louisville, Kentucky.

Wells, E. C. (2009). Building Reference Models in Soil Chemistry for Archaeological

2000 Florida International University: Excellence in Teachin

<u>Anthropology</u>	<u>Degree</u>	<u>Role</u>	<u>Completion Date</u>
Chris Eck	Ph.D.	Committee Member	2022
Liotta Dowdy	Ph.D.	Committee Member	2020
Christine Bergman	Ph.D.	Committee Member	2018

<u>Chemistry</u>	<u>Degree</u>	<u>Role</u>	<u>Completion Date</u>
Grace Binder	Ph.D.	Committee Member	2021

<u>Public Health</u>	<u>Degree</u>	<u>Role</u>	<u>Completion Date</u>
Naya Martin	M.S.	Committee Member	2020

UNDERGRADUATE MENTORING

ANALYTICAL INSTRUMENTATION SKILLS

Induced Coupled Plasma Mass Spectrometry (<15 years experience)
Induced Coupled Plasma (Optical) Emission Spectrometry (<15 years experience)
Direct Current Plasma Optical Emission Spectroscopy (10 years experience)
Electron Probe Micro Analyzer and Secondary Electron Microscopy (<15 years experience)
Fourier Infrared Transform Spectrometry (10 years experience)
Isotope Ratio Mass Spectrometry (10 years experience)
Secondary Ion Mass Spectrometer
Diamond Anvil Cell Apparatus
Synchrotron Light Source X-ray diffractometry
Expert in Transmitted and reflected light microscopy

COMMUNITY ENGAGEMENT - VOLUNTEERING & GUEST SPEAKING

Hillsborough County Public Schools – Teach-in and guest lecturer
Learning Gate Community School, Lutz, Florida
Montessori Academy of Tampa Bay
Girl Scouts of West Central Florida

OTHER ACADEMIC ACTIVITIES AS SENIOR PERSONNEL

AVOCATIONAL ACCOMPLISHMENTS

Japan Karate Association – South Atlantic Karate Association/P <</MCID 17 ✕ o KWest Cent