

Ryan A. Venturelli [she/her]

CONTACT INFORMATION

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University of South Florida
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RESEARCH INTERESTS

Isotope geochemist with expertise in geochronology, subglacial carbon cycling, and clumped isotope paleothermometry. I take a process-to-paleo approach using sub-ice (subglacial and grounding-line-proximal) sediments to reconstruct Antarctic Ice Sheet change since the Last Glacial Maximum.

EDUCATION

University of South Florida, St. Petersburg, Florida USA

PhD in Marine Science, expected graduation: December 2020

Dissertation : *Unravelling Paleoclimate's Gordian Knots: Assessing The 'What?' and 'When?' of Holocene Climate Change from Antarctica to the Florida Keys*

Advisor: Dr. Brad E. Rosenheim

Indiana State University, Terre Haute, Indiana USA

Master of Science in Earth and Quaternary Systems, 2015

Thesis: *The Ecology of Deep Sea Benthic Foraminifera on the California Margin: Epifaunal Taxa in an Infaunal World*

Advisor: Dr. Anthony E. Rathburn

Indiana University Northwest, Gary, Indiana USA

Bachelor of Science in Geology, 2013

Undergraduate Research: *Late Holocene dune development and shift in dune-building winds along southern Lake Michigan*

Advisor: Dr. Zoran Kilibarda

REFEREED JOURNAL PUBLICATIONS

- [5] **Venturelli, R. A.**, Siegfried, M.R., Roush, K.A., Li, W., Burnett, J. Zook, R., Fricker, H.A., Priscu, J.C. Leventer, A., and Rosenheim, B. E. (*in press*). Mid-Holocene Grounding Line Retreat and Re-advance at Whillans Ice Stream, West Antarctica. *Geophysical Research Letters*.
- [4] **Venturelli, R. A.**, and Rosenheim, B. E. (2019). Compositional and beam-size-dependent effects on pressure baseline in clumped isotope mass spectrometry. *Rapid Communications in Mass Spectrometry*, 33(1), 140-148.
- [3] Petersen, S.V., Defliese, W.F., Saenger, C., Daëron, M., Huntington, K.W., John, C.M., Kelson, J.R., Bernasconi, S.M., Colman, A.S., Kluge, T., Olack, G.A., Schauer, A. J., Bajnai, D., Bonifacie, M., Breitenbach, S.F.M., Fiebig, J., Fernandez, A.B., Henkes, G.A., Hodell, D., Katz, A., Kele, S., Lohmann, K.C., Passey, B.H., Peral, M.Y., Petrizzo, D.A., Rosenheim, B.E., Tripathi, A., **Venturelli, R.A.**, Young, E.D., and Winkelstern, I.Z. (2019). Effects of improved ^{17}O correction on interlaboratory agreement in clumped isotope calibrations, estimates of mineral-specific offsets, and temperature dependence of acid digestion fractionation. *Geochemistry, Geophysics, Geosystems*, 20(7), 3495-3519.
- [2] **Venturelli, R. A.**, Rathburn, A. E., Burkett, A. M., and Ziebis, W. (2018). Epifaunal foraminifera in an infaunal world: insights into the influence of heterogeneity on the benthic ecology of oxygen-poor, deep-sea habitats. *Frontiers in Marine Science*, 5, 344.
- [1] Kilibarda, Z., **Venturelli, R.A.**, and Goble, R. (2014). Late Holocene dune development and shift in dune-building winds along southern Lake Michigan. *Coastline and Dune Evolution along the Great Lakes. Geological Society of America Special Paper*, 508, 47-64.

RESEARCH FUNDING	University of South Florida	
	Von Rosenstiel Innovation Award, 2019	\$5,000
	Project: <i>Isotopic and Carbonate Chemistry Characteristics of an Antarctic Subglacial Lake</i>	
	National Ocean Science Accelerator Mass Spectrometry Laboratory	
	Graduate Student Internship, 2019	\$10,213*
	Project: <i>Investigating Carbon Cycling in an Actively Draining Antarctic Subglacial Lake</i>	
	*analytical cost covered by program	
	Geological Society of America	
	Graduate Student Research Grant, 2018	\$2,000
	Project: <i>Deconvolving Holocene Hydrologic Variability Along the Florida Keys Reef Tract</i>	
FELLOWSHIPS AND AWARDS	University of South Florida	
	COLLEGE OF MARINE SCIENCE	
	Gulf Oceanographic Trust Fellowship, 2018-2019	\$12,000
	Jack and Katharine Ann Lake Fellowship, 2017-2018	\$13,000
	Paul Getting Endowed Memorial Fellowship, 2016-2017	\$13,000
	Anne and Werner Von Rosenstiel Fellowship, 2015-2016	\$25,000
	OFFICE OF GRADUATE STUDIES	
	International Travel Grant, 2017	\$1,519
	Graduate Student Research Symposium Presentation Winner, 2017	\$500
	Indiana State University	
	COLLEGE OF GRADUATE AND PROFESSIONAL STUDIES	
	Research and Creativity Award, 2015	\$500
	EARTH AND ENVIRONMENTAL SYSTEMS	
	Outstanding Graduate Assistant Award, 2015	\$100
	Indiana University Northwest	
	GEOSCIENCES	
	Karen Brunson Memorial Award, 2013	\$300
FIELD EXPERIENCE	Subglacial Antarctic Lakes Scientific Access (SALSA) Project	
	Mercer Ice Stream, West Antarctica	2018-2019
	<i>Subglacial water and sediment sampling</i>	
	McMurdo Station, West Antarctica	2017-2018
	<i>Contamination remediation and preparation of a deep field laboratory</i>	
	Scripps Institution of Oceanography Student Cruises	
	Chief Scientist: Dave Checkley, <i>R/V Robert Gordon Sproul</i>	2014
	<i>Multicore sediment sampling</i>	
	Chief Scientist: Peter Franks <i>R/V Robert Gordon Sproul</i>	2013
	<i>Multicore sediment sampling</i>	
	Geology Field Camp: Michigan Technological University and University of Cape Town	
	Western Cape, South Africa	2011
	<i>Mapping of Proterozoic to modern geologic structures</i>	
TEACHING EXPERIENCE	University of South Florida	

- T., Siegfried, M.R., Fricker, H.A., SALSA Science team, and the WISSARD Science Team (2019). A Dynamic Holocene Grounding Line: In situ sedimentary evidence from Whillans and Mercer ice streams, West Antarctica. *AGU Fall Meeting*. San Francisco, CA.
- [15] Campbell, T.D., Patterson, M.O., Skidmore, M.L., Leventer, A., Michaud, A. B., Rosenheim, B.E., Harwood, D., Dore, J.E., Tranter, M., **Venturelli, R. A.**, Priscu, J.C., and the SALSA Science Team (2019). Physical and chemical characterization of sediments from Mercer Subglacial Lake, West Antarctica. *AGU Fall Meeting*. San Francisco, CA.
- [14] Priscu, J.C., Barker, J.D., Campbell, T., Christner, B.C., Davis, C., Dore, J.E., Fricker, H. A., Gardner, C.B., Harwood, D.M., Leventer, A., Li, W., Lyons, W.B., Michaud, A.B., Patterson, M.O., Rosenheim, B.E., Siegfried, M.R., Skidmore, M.L., Tranter, M., **Venturelli, R. A.**, Vick-Majors, T., Zook, B., and the SALSA Science Team (2019). SALSA: An Integrated Program Focusing on Carbon Transformations in Mercer Subglacial Lake located 1100 m beneath the West Antarctic Ice Sheet, *AGU Fall Meeting*. San Francisco, CA.
- [13] **Venturelli, R. A.**, Siegfried, M.R., Campbell, T., Fricker, H., Harwood, D., Leventer, A., Michaud, A.B., Patterson, M.O., Rosenheim, B.E., Skidmore, M., and the SALSA Science team (2019). Subglacial Sediments Spanning Scales: A Process-To-Paleo Perspective. *26th Annual WAIS Workshop*. Julian, CA.
- [12] Rosenheim, B.E., **Venturelli, R. A.**, Davis, C., Vick-Majors, T, Li, Michaud, A.B., Leventer, A.B., Harwood, D., Christner, B.C., Dore, J.E., Priscu, J.C., and the SALSA Science team (2019). Young Carbon beneath the West Antarctic Ice Sheet: A Unique Carbon Cycle Perspective from Mercer Subglacial Lake. *26th Annual WAIS Workshop*. Julian, CA.
- [11] Campbell, T.D., Patterson, M.O., Skidmore, M.L., Leventer, A., Michaud, A. B., Rosenheim, B.E., Harwood, D., Dore, J.E., Tranter, M., **Venturelli, R. A.**, and the SALSA Science Team (2019). Physical and chemical characterization of sediments from Mercer Subglacial Lake, West Antarctica. *26th Annual WAIS Workshop*. Julian, CA.
- [10] **Venturelli, R. A.**, Rosenheim, B. E., Roush, K., Michaud, A., Priscu, J., Skidmore, M., Dore, J., Li, W., Leventer, A., Harwood, D., SALSA Science Team, and the WISSARD Science Team (2019). Subglacial Carbon Pathways Associated with Whillans and Mercer ice streams: A SALSA and WISSARD sedimentary perspective. *XIII International Symposium on Antarctic Earth Sciences*. Incheon, Republic of Korea.
- [9] Rosenheim, B.E., Michaud, A., Broda, J., Gagnon, A., Dore, J., Leventer, A., Patterson, M., Campbell, T., **Venturelli, R. A.**, Skidmore, M., Christner, B., Priscu, J.P., and the SALSA Science Team. (2019). Challenges and successes coring sediments from Mercer Subglacial Lake. *XIII International Symposium on Antarctic Earth Sciences*, Incheon, Republic of Korea.
- [8] Davis, C., Li, W., Vick-Majors, T., Barker, J.D., Michaud, A.B., Dore, J.E., Siegfried, M.R., Tranter, M.S., Gardner, C., **Venturelli, R. A.**, Campbell, T., Patterson, M.O., Leventer A., Harwood, D.M., Rosenheim, B.E., Priscu, J.C., and Christner, B.C. (2019). Life Below an Ice Sheet: Mercer Subglacial Lake, West Antarctica, *Astrobiology Science Conference*.
- [7] **Venturelli, R. A.**, and Rosenheim, B. (2017). The Absurdity of Certainty: Propagation of Error from Δ_{47} to $\delta^{18}\text{O}$ Seawater. 6th International Clumped Isotope Workshop. Paris, France.
- [6] **Venturelli, R. A.**, Toth, L.T., and Rosenheim, B. (2017). Hard water, old water-hydrologic cycling in the Florida Keys Reef tract and its effect on interpreting radiocarbon reservoir ages. *Goldschmidt. Paris*, France.
- [5] **Venturelli, R. A.**, and Rosenheim, B. (2015). Understanding pressure baseline through measurements from an Isoprime 5kV mass spectrometer. 5th International Clumped Isotope Workshop. St. Petersburg, FL.

- [4] **Venturelli, R.A.**, Rathburn, A E, Burkett, A. M., Paddack, B.D., and Ziebis, W., S. 2014. Epifaunal taxa in an infaunal world. Annual Geological Society of America Meeting. Vancouver, BC Canada. (19–22 October 2014); *Geological Society of America Annual Meeting. Program with Abstracts*, Vol. 46, No. 6, p.124.
- [3] **Venturelli, R.A.**, Rathburn, A., Paddack, B., Burkett, A., Ziebis, W., and Perez, E. The Ecology of Benthic Foraminifera Living in an Oxygen Minimum Zone on the Eastern Pacific Margin. North Central Geological Society of America Meeting. Lincoln, NE. (24-25 April, 2014); *Geological Society of America Programs with Abstracts*, Vol. 46, No. 4, p. 64.
- [2] **Venturelli, R.A.** and Kilibarda, Z.. Heavy Minerals In Beach And Dune Sand Along Southern Lake Michigan. Annual Geological Society of America Meeting. Charlotte, NC. (4-7 November, 2012); *Geological Society of America Programs with Abstracts*, Vol. 44, No. 7, p. 554.
- [1] **Venturelli, R.A.**, Kilibarda Z., and Graves, N. Geomorphology of Coastal Dunes Near Southern Shores of Lake Michigan. Annual Geological Society of America Meeting. Minneapolis, MN. (9-12 October, 2011); *Geological Society of America Programs with Abstracts*, Vol. 43, No. 5, p. 251.