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RESEARCH INTERESTS

Paleoceanography, Paleoclimatology, Micropaleontology, Proxy Development, ENSO, Foraminiferal & Seawater Geochemistry (Trace Metals, Stable Isotopes), Carbonate Dissolution, Paleoclimate Modeling, Data-Model Comparison, Abrupt Climate Change

EDUCATION

2015 Ph.D., Oceanography

Texas A&M University, College Station, TX

Dissertation: *Paleotemperature Proxies: Validation and Applications in the Atlantic and Pacific Oceans*

Advisor: Dr. Matthew W. Schmidt

2010 M.S., Marine and Atmospheric Science

Stony Brook University, Stony Brook, NY

Thesis: *The Tropical Atlantic Response to Abrupt Climate Change During Interstadial 12*

Advisor: Dr. David E. Black

2007 B.S., Geology

B.S., Astronomy, Physics minor

Completion of Double Bachelor's Degree Program

University of Massachusetts, Amherst, MA

Thesis: *Using Geochemical Proxies to Reconstruct Ancient Deep-Sea Circulation Through the Caribbean and Gulf of Mexico*

Advisor: Dr. R. Mark Leckie

POSITIONS

2015 – Present	Post-Doctoral Fellow , Advisor: Dr. David Lund Department of Marine Science, University of Connecticut
Spring 2015	Graduate Lecturer , Department of Oceanography, Texas A&M
Fall 2014	Teaching Assistant , Department of Oceanography, Texas A&M
2010 – 2014	Research Assistant , Department of Oceanography, Texas A&M
2008 – 2010	Research Assistant , School of Marine and Atmospheric Science, Stony Brook University
2007 – 2008	Teaching Assistant , School of Marine and Atmospheric Science, Stony Brook University

PUBLICATIONS As of August, 2016: 164 citations, h-index of 5 (Google Scholar)

IN REVIEW

- (10) **Hertzberg, J. E.** and M. W. Schmidt. Paleotemperatures. In: *Encyclopedia of Geochemistry*. Ed: W. White. In review, publication in late 2016 (**Invited**)
- (9) **Hertzberg, J. E.**, D. C. Lund, A. Schmittner, and A. L. Skrivanek. Evidence for a biological pump driver of atmospheric CO₂ rise during Heinrich Stadial 1. In review at *Geophysical Research Letters*

PUBLISHED

- (8) Lyle, M., R. A. Pockalny, P. J. Polissar, J. Lynch-Stieglitz, S. C. Bova, A.G. Dunlea, H. L. Ford, **J. E. Hertzberg**, S. A. Hovan, A. W. Jacobel, C. A. Wertman, A. E. Maloney, R. W. Murray, J. Wilson, K. Wejnert, and R. C. Xie. Dynamic carbonate sedimentation on the Northern Line Islands Ridge, Palmyra Basin. *Marine Geology*, 379, 194-207.
- (7) **Hertzberg, J. E.**, M. W. Schmidt, T. S. Bianchi, R. W. Smith, M. R. Shields, and F. Marcantonio (2016). Comparison of eastern tropical Pacific TEX₈₆ and *G. ruber* Mg/Ca derived sea surface temperatures: Insights from the Holocene and Last Glacial Maximum. *Earth and Planetary Science Letters*, 434, 320-332.
- (6) Lynch-Stieglitz, J., P. J. Polissar, A. W. Jacobel, S. A. Hovan, R. A. Pockalny, M. Lyle, R. W. Murray, A. C. Ravelo, S. C. Bova, A. G. Dunlea, H. L. Ford, **J. E. Hertzberg**, C. A. Wertman, A. E. Maloney, J. Shackford, K. Wejnert, and R. C. Xie (2015). Glacial-interglacial changes in central tropical Pacific surface seawater property gradients. *Paleoceanography*, 30, 423-438.
- (5) **Hertzberg, J. E.** and M. W. Schmidt (2013). Refining *Globigerinoides ruber* Mg/Ca Paleothermometry in the Atlantic Ocean. *Earth & Planetary Science Letters*, 383, 123-133.
- (4) Schmidt, M. W., P. Chang, **J. E. Hertzberg**, T. R. Them, L. Ji, and B. L. Otto-Bliesner (2012). Impact of abrupt deglacial climate change on tropical Atlantic subsurface temperatures. *Proceedings of the National Academy of Sciences (PNAS)*, 109, 36, 14348-14352.
- (3) **Hertzberg, J. E.**, D. E. Black, L. C. Peterson, R. C. Thunell, and G. H. Haug (2012). Decadal- to centennial-scale tropical Atlantic climate variability across a Dansgaard-Oeschger cycle. *Paleoceanography*, 27, PA3218.
- (2) Schmidt, M. W. and **J. E. Hertzberg** (2011). Abrupt climate change during the last Ice Age. *Nature Education Knowledge* (open access, peer reviewed educational articles), 2(12): 11.
- (1) McIntosh, D. H., Y. Guo, **J. E. Hertzberg**, N. Katz, H. J. Mo, F. C. van den Bosch, and X. Yang (2008). Ongoing assembly of massive galaxies by major merging in large groups and clusters from the SDSS. *Monthly Notices of the Royal Astronomical Society*, 388(4), 1537 - 1556.

IN PREPARATION

Hertzberg, J. E. and M. W. Schmidt. A latitudinal transect of $\delta^{18}\text{O}_{\text{SW}}$ - salinity gradients of surface and subsurface North Atlantic seawater: Implications for paleoceanographic reconstructions. For submission to *Geophysical Research Letters*

Hertzberg, J. E. and M. W. Schmidt. On the Ba/Ca - sea surface salinity relationship of the Eastern Equatorial Pacific. For submission to *Marine Chemistry*

Lovely, M. R., F. Marcantonio, M. W. Lyle, R. Ibrahim, J. K. Wang, and **J. E. Hertzberg**. Grain size biasing of ²³⁰Th-driven focusing factors in the Panama Basin.

FELLOWSHIPS, SCHOLARSHIPS, GRANTS

FUNDED FELLOWSHIPS BASED ON RESEARCH PROPOSALS

- 2014 – 2015 Johanna M. Resig Foraminiferal Research Fellowship, Given by the Cushman Foundation for Foraminiferal Research, \$12,500
- 2012 – 2013 ODASES (Ocean Drilling & Sustainable Earth Science) Graduate Fellowship, Texas A&M-IODP Joint Program, \$25,000

MERIT-BASED FELLOWSHIPS AND SCHOLARSHIPS

- 2013, 14 James Sharp Graduate Fellowship (received 2 times), Department of Oceanography, Texas A&M University
- 2012, 13, 14 Unocal Graduate Fellowship in Geosciences (received 3 times), College of Geosciences, Texas A&M University
- 2012 David McGrail Memorial Scholarship in Oceanography, Department of Oceanography, Texas A&M University
- 2011 Ralph Rayburn '69 Texas Sea Grant Scholarship, Texas Sea Grant
- 2010 – 2013 NSF S-STEM Continental Margins Scholarship, Department of Oceanography, Texas A&M University
- 2010 – 2013 Louis and Elizabeth Scherck Fellowship, Department of Oceanography, Texas A&M University
- 2010 Lechner Graduate Scholarship, College of Geosciences, Texas A&M University
- 2007 Dean's Scholarship, School of Marine and Atmospheric Science, Stony Brook University

TRAVEL GRANTS

- Oceanography Graduate Council, 2011, 2012, 2013, 2014
- PAGES Past Global Changes, COMPARE 2012 Workshop, 2012
- V.M. Goldschmidt Geochemistry Conference in Prague, 2011

AWARDS

- 2015 John Wormuth Memorial Award for Excellence in Undergraduate Teaching
- 2009 AAAS/Science Excellence in Science Award

INVITED SEMINARS

- February 2016 (2 talks)
Wesleyan University, Department of Earth and Environmental Sciences
Department Seminar: *Taking the Temperature of Past Oceans: New Insights on Paleothermometers*
Oceans and Climates Seminar: *Tropical Pacific Climate Variability across Past Abrupt Climate Events: An Analogue for the Future*
- September 2015
Old Dominion University, College of Ocean, Earth & Atmospheric Sciences
Department Seminar: *Unique Applications of the Foraminiferal Mg/Ca Temperature Proxy in the Eastern Tropical Pacific*

CONFERENCE TALKS AS PRESENTING AUTHOR

- (4) **Hertzberg, J. E.** and M. W. Schmidt. *Multi-species temperature and proxy reconstructions of the tropical Pacific mean state across Marine Isotope Stage 3*. AGU Fall Meeting, San Francisco, CA, 2015.
- (3) **Hertzberg, J. E.**, M. W. Schmidt, T. S. Bianchi, R. W. Smith, M. R. Shields, and N. J. Randle. *TEX₈₆ temperatures and multi-species foraminiferal Mg/Ca temperatures and $\delta^{13}\text{C}$ reflect changes in the glacial nutrient dynamics and upper water column hydrography of the Eastern Equatorial Pacific*. AGU Fall Meeting, San Francisco, CA, 2013.
- (2) **Hertzberg, J. E.** and M. W. Schmidt. *Reinvestigating the “salinity effect” on Atlantic *Globigerinoides ruber* Mg/Ca ratios*. AGU Fall Meeting, San Francisco, CA, 2012.
- (1) **Hertzberg, J. E.**, M. W. Schmidt, and P. Chang. *Impact of abrupt deglacial climate change on tropical Atlantic subsurface temperatures*. COMPARE 2012 Workshop on Comparing Ocean Models with Paleo-Archives, University of Bremen, Germany, 2012.

CONFERENCE POSTERS AS PRESENTING AUTHOR

- (6) **Hertzberg, J. E.**, D. C. Lund, A. Schmittner, and A. Skrivaneck. *Evidence for a biological pump driver of atmospheric CO₂ rise during Heinrich Stadial 1*. 12th International Conference on Paleoceanography, Utrecht, Netherlands, 2016 (upcoming)
- (5) **Hertzberg, J. E.** and M. W. Schmidt. *Thermocline temperature variability reveals shifts in the tropical Pacific mean state across Marine Isotope Stage 3*. AGU Fall Meeting, San Francisco, CA, 2014.
- (4) **Hertzberg, J. E.**, M. W. Schmidt, T. S. Bianchi, R. W. Smith, and M. R. Shields. *Comparison of TEX₈₆ and foraminiferal Mg/Ca SSTs reflects changes in glacial nutrient dynamics of the Eastern Equatorial Pacific*. 11th International Conference on Paleoceanography, Sitges, Spain, 2013.
- (3) **Hertzberg, J. E.**, P. Chang, M. W. Schmidt, L. Ji, and B. L. Otto-Bliesner. *Modeling the response of tropical North Atlantic subsurface temperatures to AMOC variability under LGM boundary conditions*. AGU Fall Meeting, San Francisco, CA, 2011.
- (2) **Hertzberg, J. E.** and M. W. Schmidt. *Quantifying the [Ba²⁺]: $\delta^{18}\text{O}_{\text{SEAWATER}}$: surface salinity relationship in the Eastern Equatorial Pacific*. V. M. Goldschmidt Conference, Prague, Czech Republic, 2011.
- (1) **Hertzberg, J. E.**, D. E. Black, L. C. Peterson, R. C. Thunell, and G. H. Haug. *The tropical Atlantic response to abrupt climate change during Interstadial 12*. AGU Fall Meeting, San Francisco, CA, 2010.

CONFERENCE PRESENTATIONS AS CO-AUTHOR

- (6) Lyle, M, T. C. Moore Jr., A. C. Ravelo, J. Baldauf, J. Backman, H. Ford, A. Stepanova, and **J. E. Hertzberg**. *Paradoxical high productivity in the Eastern Equatorial Pacific during the Miocene El Padre, ODP 849, IODP U1337, U1338*. AGU Fall Meeting, 2015.
- (5) Randle, N. J., M. W. Schmidt, T. S. Bianchi, **J. E. Hertzberg**, and M. R. Shields. *Understanding TEX₈₆^H temperature estimates in the Eastern Equatorial Pacific over the last deglacial*. AGU Fall Meeting, 2014.
- (4) Lovely, M. R., F. Marcantonio, M. W. Lyle, R. Ibrahim, J. K. Wang, and **J. E. Hertzberg**. *Grain size biasing of ²³⁰Th-driven focusing factors in the Panama Basin*. AGU Fall Meeting, 2014.

- (3) Schmidt, M. W., **J. E. Hertzberg**, and T. R. Them. *Foraminiferal Ba/Ca ratios and $\delta^{18}O_{SW}$ values from the southern Caribbean reflect hydrologic cycle variability over the past 21 kyr.* 11th International Conference on Paleoceanography, Sitges, Spain, 2013.
- (2) Schmidt, M. W., **J. E. Hertzberg**, T. S. Bianchi, R. W. Smith, and M. R. Shields. *Holocene and Last Glacial Maximum TEX₈₆ and Globigerinoides ruber Mg/Ca sea surface temperatures from the Eastern Equatorial Pacific.* AGU Fall Meeting, 2012.
- (1) Schmidt, M. W., **J. E. Hertzberg**, T. R. Them, A. O. Parker, and P. Chang. *Deglacial subsurface temperature change in the tropical North Atlantic linked to Atlantic meridional overturning circulation variability.* AGU Fall Meeting, 2011.

WORKSHOP PARTICIPATION

Individual Foraminifera Analyses for Paleoceanographic Reconstructions workshop, Utrecht, Netherlands, 2016 (upcoming).

COMPARE 2012 Workshop on Comparing Ocean Models with Paleo-Archives, University of Bremen, Germany, 2012.

TEACHING EXPERIENCE

- Spring 2015 **Graduate Lecturer**, Course: *Introductory Oceanography*
 Department of Oceanography, Texas A&M University
 Enrollment: 68 students; Full Instructor of Record.
 Mean course evaluation score: 4.6 (1 – 5 scale, 1 lowest, 5 highest)
- Fall 2014 **Teaching Assistant**, Course: *Introductory Oceanography Laboratory*
 Department of Oceanography, Texas A&M University
 3 2-hour weekly lab sections, 20 students/section; Instructor of Record
- Spring 2013 **Guest Lecturer**, Course: *Global Change*
 College of Geosciences, Texas A&M University
 2 lectures on oceanography and ocean acidification as part of a semester course in STEM teaching professional development
- Fall 2012 **Guest Lecturer**, Course: *Introductory Oceanography*
 Department of Oceanography, Texas A&M University
 3 lectures on marine geology
- Fall 2008 **Teaching Practicum**, Course: *Introductory Oceanography*
 School of Marine and Atmospheric Science, Stony Brook
 Semester-long mentoring program working alongside course instructor to develop and deliver lectures, and create and implement in-class exercises and course examinations
- 2007 – 2009 **Teaching Assistant**, Courses: (1) *Current Topics in World Climate and Atmosphere*; (2) *Waves, Tides, Beaches*; (3) *Introductory Oceanography*
 School of Marine and Atmospheric Science, Stony Brook

PROFESSIONAL DEVELOPMENT

- 2013 *Preparing for an Academic Career in the Geosciences* workshop through On the Cutting Edge, University of Colorado, Boulder
- 2013 Semester course in *STEM Teaching Professional Development* through the Center for Teaching Excellence, Texas A&M University

PROFESSIONAL SERVICE

MANUSCRIPT REVIEWER

Nature; Paleoceanography; Geophysical Research Letters; Geochemistry, Geophysics, Geosystems; Journal of Geophysical Research – Oceans; Boreas;

EXECUTIVE COMMITTEE, AGU PALEOCEANOGRAPHY & PALEOCLIMATOLOGY FOCUS GROUP

2015 – present Early Career Representative
2013 – 2015 Student Representative

SERVICE FOR THE AMERICAN GEOPHYSICAL UNION

2015 – present AGU Student and Early Career Leaders Group member
2014 – present Eos.org website advisory panel member
2015 Video Options Advisory Group for 2015 AGU Fall Meeting
2015 Participant in Science Policy Online Community
2014 Paleoceanography & Paleoclimatology representative for American/Canadian Geophysical Union Joint Assembly 2015
2013 Assistant Secretary for Paleoceanography & Paleoclimatology Focus Group for 2013 AGU Fall Meeting

DEPARTMENTAL SERVICE

Poster Judge for Communicating Ocean Sciences course, Texas A&M University, 2015
Oceanography Graduate Council, Texas A&M University, 2010 – 2015; *Elected Secretary from 2012 to 2013 and President from 2013 to 2015*
Bay Scallop Bowl judge (National Ocean Sciences Bowl competition), 2010
Graduate Programs Committee, Student Representative, School of Marine and Atmospheric Sciences, Stony Brook University, 2009 – 2010
Graduate Student Council, School of Marine and Atmospheric Sciences, Stony Brook University, 2007 – 2010; *Elected Secretary from 2009 to 2010*

FIELD EXPERIENCE

Total of 80 days at sea:

2013 NOAA Ship *Ron Brown* (22 days) – North Atlantic (Reykjavik, Iceland to Funchal, Portugal), Cruise RB1304: A16N GO-SHIP/CO₂ Repeat Hydrography Cruise, Leg 1; Shipboard CFC, SF₆, and N₂O analyst assistant, CTD sampling.
2012 R/V *Marcus Langseth* (27 days) – Line Islands Ridge (Honolulu, HI to Honolulu, HI), Cruise MGL1208: Line Islands geophysical survey and sediment coring cruise; Planktonic foraminifera biostratigraphy and sediment core curating.
2010 R/V *Melville* (27 days) – Eastern Tropical Pacific (Puntarenas, Costa Rica to Arica, Chile), Cruise MV1014: ²³⁰Th dynamics in the Eastern Equatorial Pacific Ocean; Water sampling, sediment coring, core descriptions, core curating, geophysical watch.

- 2010 R/V *Hermano Ginés* (2 days) – Cariaco Basin, Venezuela (Margarita Island to Margarita Island); Sediment trap recovery and deployment, sediment coring.
- 2009 R/V *Seawolf* (2 days) – Hudson Canyon, New York Bight (Atlantic City, NJ to Staten Island, NY); Sediment trap deployment.

PROFESSIONAL MEMBERSHIPS

American Geophysical Union (AGU)

Cushman Foundation for Foraminiferal Research

Earth Science Women’s Network

PAGES Past Global Changes