

Laura L. Haynes
124 Raymond Avenue, Box 229
Poughkeepsie, NY 12604
Lhaynes@vassar.edu www.lauralhaynes.com
(919)-323-0140

PROFESSIONAL EXPERIENCE

Vassar College, Poughkeepsie, NY

Assistant Professor, Department of Earth Science and Geography August 2020-present

Lamont-Doherty Earth Observatory, Palisades, NY

Adjunct Associate Research Scientist October 2021-present

Rutgers University, New Brunswick, NJ

EOAS Postdoctoral Fellow, Department of Marine and Coastal Sciences July 2019-August 2020

EDUCATION

Columbia University Department of Earth and Environmental Sciences

New York, NY

▪ Ph.D., M.Phil., M.A. 2013-2019

Dissertation Title: *"The Influence of Paleo-Seawater Chemistry on Foraminifera Trace Element Proxies and their Application to Deep-Time Paleo-Reconstructions"*. Committee: Bärbel Hönisch (primary advisor), Maureen Raymo, Sidney Hemming.

Pomona College, Claremont, CA

▪ B.A. in Geology *cum laude* 2009-2013

Thesis Title: Interbasin Paleoclimate Records from Pleistocene Lake Bonneville Marl of the Tule and Bonneville Basins, UT.
Advisor: Robert Gaines.

University of Canterbury, Christchurch, NZ

▪ Certificate of Proficiency in Science Study Abroad Semester, 2012

FUNDING AND AWARDS

Pending NSF MG&G (\$165,839): "Using Individual Foraminifera Analyses to Reconstruct the True Magnitude of Warming, Ocean Acidification, and Ecological Change during Eocene Hyperthermals"

Pending NOAA Program on Marine Carbon Dioxide Removal (\$510,359): "Determining the Influence of Ocean Alkalinity Enhancement on Foraminifera Calcification, Distribution, and CaCO₃ Production"

2023 Carolyn Grant '36 Teaching Fund (\$634): "Histories of Art, Ritual, and the Earth: Ethical Research Practice and Exploration in Iceland"

2022 NSF OCE (\$69,590): ROA Supplement Subaward: "Experimental refinement of the boron isotope proxy in planktic foraminifera - temperature, asymbiotic sensitivity, and seawater elemental composition". Subaward PI; Lead PI: Bärbel Hönisch, Columbia University.

2022 NSF EAR-IF and MG&G (\$169,340): "Acquisition of a Tabletop Scanning Electron Microscope and

- Energy Dispersive Spectrometer by the Earth Science Department at Vassar College, a PUI". Lead PI; Co-PIs: Jeffrey Walker & Kirsten Menking.
- 2021 Vassar College Research Committee (\$4,000)
"Records of Climate and Carbon Cycling in the Warm Geologic Past".
- 2021 Asprey CCAS Keeping Current Fund, Vassar College
- 2020 IODP Expedition 378 Post Expedition Award (\$17,993)
- 2019 Rutgers EOAS Postdoctoral Fellowship
"Determining the source of vital effects in foraminifera paleoclimate proxies via Transcriptome Sequencing".
- 2017-2018 Schlanger International Ocean Discovery Program Graduate Fellowship
"Assessing Deep Pacific Carbon Storage across the Mid-Pleistocene Transition".
- 2017 Virtual Drillship Course Scholarship, IODP
- 2016-2019 Columbia Climate Center Award (\$10,000)
"Deep Pacific Carbonate Chemistry Across the Mid-Pleistocene Transition"
- 2015 Chevron Student Initiative Fund Award (\$900)
"Assessing the Impact of Hydrothermal Activity on B/Ca in Benthic Foraminifers"

OTHER HONORS

- 2017 Sara Langer Book Prize for Contributions to Student Life
- 2014, 2015 NSF GRFP Honorable Mention
- 2015 NSF Urbino Summer School in Paleoclimatology Scholarship
- 2012 Pomona College Summer Undergraduate Research Fellowship
- 2011 Andrew W. Mellon Foundation Environmental Analysis Research Fellowship
- 2013 Phi Beta Kappa, Pomona College
- 2013 Richard Strehle Award in Geology, Pomona College

PUBLICATIONS

*Vassar undergraduate

(Under Review) Towards a Cenozoic History of Atmospheric CO₂. The Cenozoic CO₂ Proxy Integration Project (CenCO₂PIP) Consortium. *Science*.

(In Revision) **Haynes, L.L.**, Hönisch, B., Holland, K., Rosenthal, Y., Eggins, S.E. "Calibrating Non-Thermal Effects on Planktic Foraminiferal Mg/Ca for Application Across the Cenozoic". *Paleoceanography and Paleoclimatology*.

(2022) Li, C., Clementi, V., Bova, S., Rosenthal, Y., Childress, L.B., Wright, J.D., Jian, Z., and **Expedition 379T Scientists**. "The sediment green-blue color ratio as a proxy for biogenic silica productivity along the Chilean Margin". *Geochemistry, Geophysics, Geosystems* 23.

(2022) Clementi, V., Rosenthal, Y., Bova, S., Thomas, E., Wright, J., Mortlock, R., Cowling, O., Godfrey, L., Childress, L., Aiello, I., Avila, A., Biggs, W., Charles, C., Cheung, A., deLong, K., Dove, I., Du, X., Estes, E., Fuentes, U., Garcia-Lasanta, C., Goldstein, S., Golub, A., Hagemann, J.R., Hatfield, R., **Haynes, L.L.**, Hess, A.,

Irali, N., Kiro, Y., Monteagudo, M., Lambert, J., Li, C., Longo, W., McGrath, S., Riechelsohn, H., Robinson, R., Sarao, J., Sproson, A., Taylor, S., Yokoyama, Y., and Yu, S. "Deep submarine infiltration of altered geothermal groundwater on the south Chilean Margin". *Nature Communications: Earth & Environment*.

(2022) Röhl, U., Thomas, D., Childress, L., & the **Expedition 378 Scientists**. *South Pacific Paleogene Climate*. Proceedings of the International Ocean Discovery Program, 378: College Station, TX (International Ocean Discovery Program).

(2021) Hönisch, B., Fish, C.R., Phelps, S., **Haynes, L.L.**, Dyez, K., Holland, K., Fehrenbacher, J., Allen, K.A., Eggins, S.M., and Goes, J.I. "Symbiont photosynthetic competency and its effect on boron proxies in planktic foraminifera". *Paleoceanography & Paleoclimatology*.
<https://doi.org/10.1029/2020PA004022>

(2021) Zhou, X., Rosenthal, Y., **Haynes, L.L.**, Si, W., Evans, D., Huang, K-F., Hönisch, B., and Erez, J. (2021). "Planktic foraminiferal Na/Ca: a potential proxy for seawater calcium concentration". *Geochimica et Cosmochimica Acta* 305: 306-322. <https://doi.org/10.1016/j.gca.2021.04.012>

(2020) **Haynes, L.L.**, and Hönisch, B. "The Seawater Carbon Inventory at the Paleocene-Eocene Thermal Maximum". *Proceedings of the National Academy of Sciences*. <https://doi.org/10.1073/pnas.2003197117>

(2020) Thomas, D.J., Röhl, U., Childress, L.B., and the **Expedition 378 Scientists**. "Expedition 378 Preliminary Report: South Pacific Paleogene Climate". International Ocean Discovery Program.
<https://doi.org/10.14379/iodp.pr.378.2020>

(2020) Holland, K., Branson, O., **Haynes, L.L.**, Hönisch, B., Allen, K.A., Russell, A., Fehrenbacher, J., Spero, H., Eggins, S.M. . "Constraining multiple controls on planktic foraminiferal Mg/Ca". *Geochimica et Cosmochimica Acta*, 273, 116-136. <https://doi.org/10.1016/j.gca.2020.01.015>

(2020) Harper, D.T., Hönisch, B., Zeebe, R., **Haynes, L.L.**, Thomas, E., and Zachos, J.C. "Surface ocean acidification during Eocene-Thermal Maximum-2: Implications for Carbon Release". *Paleoceanography and Paleoclimatology*, 35. <https://doi.org/10.1029/2019PA003699>

(2019). **Haynes, L.L.**, Hönisch, B., Holland, K., Rosenthal, Y., and Eggins, S.M. (2019). "Evaluating the planktic foraminiferal B/Ca proxy for application to deep time paleoceanography" *Earth and Planetary Science Letters* 528, 1-11. <https://doi.org/10.1016/j.epsl.2019.115824>

(2019). Farmer, J.R., Goldstein, S.L., **Haynes, L.L.**, Hönisch, B., Kim, J., Pena, L., Jaume-Seguí, M., and Yehudai, M. "Data constraints on ocean-carbon cycle feedbacks at the mid-Pleistocene transition". *PAGES Magazine* 27:2, 62-63.

(2019). Farmer, J.R., Hönisch, B., **Haynes, L.L.**, Kroon, D., Jung, S., Ford, H.L., Raymo, M.E., Bell, D.B., Jaume Seguí, M., Goldstein, S.L., Pena, L.D., Yehudai, M., and Kim, J. "Deep Atlantic Ocean Carbon Storage and the Rise of 100-kyr cycles". *Nature Geoscience* 12(5), 355-360. <https://doi.org/10.1038/s41561-019-0334-6>

(2019). Hönisch, B., Eggins, S.M., **Haynes, L.L.**, Allen, K.A., Holland, K. and Lorbacher, K. (Boron Proxies in Paleoceanography and Paleoclimatology, First Edition. John Wiley and Sons Ltd., Series on New Analytical Methods in Earth and Environmental Sciences.

(2017). **Haynes, L.L.**, Hönisch, B., Dyez, K., Holland, K., Rosenthal, Y., Fish, C., Subhas, A. V. & Rae, J. W. B. "Calibration of the B/Ca proxy in the planktic foraminifer *Orbulina universa* to Paleocene seawater conditions". *Paleoceanography* 32(6), 580-599.

(2017). Holland, K., Eggins, S.E., Hönisch, B., and **Haynes, L.L.** "Calcification rate and microenvironment response of the planktic foraminifer *Orbulina universa* to changing seawater carbonate chemistry" (2017). *Earth and Planetary Science Letters* 464, 124-134.

(2016). Allen, K.A., Hönisch, B., Eggins, S.E., **Haynes, L.L.**, Rosenthal, Y., & Yu, J. "Trace element proxies for surface ocean conditions: A synthesis of culture calibrations with planktic foraminifera". *Geochimica et Cosmochimica Acta* 193, 197-221.

(Submitted) Holland, K., Eggins, S.E., Sadekov., A., Misra, S., Hönisch, B., **Haynes, L.L.**, and Zeebe, R. "Intra-shell $d^{11}B$ variation in the cultured planktic foraminifer *Orbulina universa*." Submitted to *Chemical Geology*.

(In preparation) **Haynes, L.L.**, Poniatowski, E.*, Fehrenbacher, J., Lane, K., Hönisch, B., Izaguirre, I., and Kim, Y. "The influence of Enhanced Alkalinity on *Globigerina bulloides* calcification". In prep. for *Scientific Reports*.

(In preparation) **Haynes, L.L.**, Ford, H.L., Hönisch, B., Farmer, J., Raymo, M.E., and Bickert, T. "Benthic foraminifera trace element records across the Mid-Pleistocene Transition: A global perspective". In prep. for *Journal of Foraminiferal Research*, special issue on geochemical applications of foraminifera.

(In preparation) Harper, D.T., Hönisch, B., Bowen, G.J., Zeebe, R., **Haynes, L.L.**, Penman, D.E., and Zachos, J.C. "Long- and short-term covariance of sea surface temperature and atmospheric CO₂ during the late Paleocene and early Eocene (59 to 53 Ma): Implications for greenhouse forcing and Earth system climate sensitivity".

TEACHING

Vassar College

- ART/ESCI-369: Histories of Art, Ritual, and the Earth: Ethical Research Practice & Exploration (Intensive)
- ESCI-153: Fluid Earth: Oceans, Atmosphere, and the Climate System
- ESCI-325: Mass Extinctions
- ESCI-277: Biogeochemistry
- ESCI-321: Paleoceanography and Deep Sea Sediments (Intensive)
- ESCI-121: Oceanography

Columbia University

- Lab Teaching Assistant, Introduction to the Climate System
- Lead Teaching Fellow

- Teaching Assistant, Introduction to Oceanography

Pomona College

- Teaching Assistant, "The Changing Climate" Freshman Writing Seminar

INDEPENDENT PROJECTS AND STUDIES

- Grand Challenges: Increasing Accessibility of Methods in Earth Science SU 2023 (3 students)
- Independent Study in Eocene Paleooceanography FA 2021, SP 2022, SP2023 (1 student each)
- Independent Study in Geology Museum Design SP 2021 (3 students), FA 2021 (2 students), SP 2022 (1 student)
- Student Engaged Pedagogical Partnership FA 2021 (1 student)
- Senior Independent Work in Physical Oceanography SP 2021 (1 student)

RESEARCH MENTORING

Vassar College

- Claire McHarg ('24, Senior Thesis, ESCI)
- Monika Sweeney ('24, Senior Thesis, ESCI)
- Zarina Guefack ('24, Senior Thesis, ESCI)
- Amelia Faucher ('24, Senior Thesis, ESCI)
- Elise Poniatowski ('23, URSI, Research Assistant, Senior Thesis, ESCI)
- Ada King ('23, URSI, Senior Thesis, ESCI)
- James Grosjean ('22, Senior Thesis, ESCI)
- Will Riley ('22, Senior Thesis, ESCI)
- Kendall Hayes ('22, Research Assistant, Senior Thesis, ESCI)
- Taber Kremer ('22, Senior Thesis, ENST)
- Carter Mucha ('23, Summer Research Assistant)

Columbia University

- NSF/International Ocean Discovery Program REU Mentor Summer 2016, 2018
- Earth Institute Research Assistant Supervisor Fall 2016-Spring 2018

FIELD EXPERIENCE

- Foraminifer Culture Experiments: Catalina Island, CA & Isla Magueyes, Puerto Rico 2013, 2015, 2022
- Foraminifera assemblages and environmental change in the Hudson River 2020-Present
- Sedimentologist on IODP Expedition 378: South Pacific Paleogene Climate January 2020
- Inorganic Geochemist on JR100: Chilean Margin Paleoclimate July-August 2019
- Field Geology Course: Azores Islands Geology & Biogeography 2017
- Field Geology Course: Bahamas Carbonate Platform Sedimentology 2015
- Geological Field Mapping Course: Catskills Region, NY 2014
- Senior Thesis Research: Carbonate Sediments of the Pluvial Lake Bonneville 2012
- Keck Geology Consortium Research: Sediment Coring of Lough Carra, Ireland 2012

PROFESSIONAL TRAINING AND WORKSHOPS

- Quaternary Interglacials Working Group Workshop, LDEO 2022
- BoatUS Powerboat Handling 2022
- Advancing Scientific Ocean Drilling IMPACT 2022
- NAGT Early Career Geoscience Workshop 2021
- Community-Driven Science Themes for NSF's Support of Paleoclimate Research 2021
- GSA Pardee: Next Generation of Geoscience Leaders 2020
- IODP NEXT (Ocean Drilling Beyond 2023) Workshop 2019
- RCN Workshops: Cenozoic pCO₂ Reconstructions 2017, 2018
- European Consortium for Ocean Research Drilling Virtual Drillship Training Course 2017
- Individual Foraminifera Analysis Workshop, ICP 2016 2016
- Urbino Summer School in Paleoclimatology 2015
- PADI Rescue Diver Certification 2014

INVITED PRESENTATIONS

- 2022 Colby College
- 2022 Colgate University
- 2022 George Mason University
- 2021 Goethe University Frankfurt Geoscience Colloquium
- 2021 Vassar Farm Committee, Status of Road Salt leaching from the Vassar Horse Barns
- 2021 Scripps Institution of Oceanography Geoscience/Marine Chemistry and Geochemistry Seminar
- 2020 Northwestern University Geochemistry Group
- 2020 Colby College Paleoceanography Course
- 2020 Palaeo-PERCS Early Career Seminar
- 2019 Princeton University, EGGS Seminar Series
- 2019 Montclair State University, Sustainability Seminar Series
- 2018 U.S. Advisory Committee for Scientific Ocean Drilling, Summer Meeting
- 2017 Rutgers University, Lunch Seminar
- 2017 Cambridge University, Isotope Coffee Seminar
- 2015 AGU Fall Meeting

COLLEGE AND PROFESSIONAL SERVICE

- Environmental Research Institute Committee Fall 2023-Present
- Climate Action and Sustainability Committee Fall 2023-Present
- Dean of the College Review Committee Member Spring 2023
- Environmental Studies Program Steering Committee Member Fall 2021-Present
- CCP Subcommittee on Study Abroad Fall 2021
- Search committee member, joint ENST/STEM hire in environmental justice Fall 2021
- Reviewer, *Nature Geoscience*, *Nature Communications*, *Geochimica et Cosmochimica Acta*, *Paleoceanography and Paleoclimatology*, *Geochemistry*; *Geophysics*; *Geosystems*, NSF ad-hoc review, NSF GRFP Fellowship
- Session Convener, American Geophysical Union Fall Meeting 2020
"Earth System Evolution and Response to Ocean Acidification"

- Session Convener, Goldschmidt Geochemistry Conference
"Dynamics and Mechanisms of Warm Climates & Climate Transitions" 2018

OUTREACH AND SCIENCE COMMUNICATION

- "This is Science" Podcast Interview 2020
- American Museum of Natural History Climate Week: Past Climates via Ocean Drilling 2020
- School of the Future, NYC: Class Visits on Climate Science 2018
- Climate Science Communication: Grace Church High School 2018
- "Ask a Climate Scientist" Day with the Climate Museum 2018
- BioBase After School & Sunday Program Volunteer Fall 2014, Spring 2018
- Lamont Doherty Open House TIMS Lab tour leader 2016, 2017, 2018
- Port Chester High School Science Research Program Symposium Guest Speaker 2017
- Workshop on Journalism and Climate: The Brown Institute for Media Innovation Fall, Spring 2017
- St. Thomas Aquinas Earth Day Fair 2015
- Girl's Science Day Volunteer 2013, 2014, 2018

SOCIETY MEMBERSHIPS

- Geological Society of America 2013-Present
- American Geophysical Union 2013-Present
- Association for Women Geoscientists 2015-Present
- National Association of Geoscience Teachers 2020-Present

CONFERENCE ABSTRACTS

*Denotes undergraduate student author

Haynes, L.L., Poniatowski, E.*, Fehrenbacher, J., Lane, K., Hönisch, B., Izaguirre, I., and Kim, Y.* "Determining the Influence of Ocean Alkalinity Enhancement (OAE) on Foraminifera Calcification via MicroCT Imaging". Forams Conference, Perugia, Italy, 2023 (Withdrawn).

Haynes, L.L., Röhl, U., Poniatowski, E.*, Mucha, C.*, and King, A.*. "Eocene Climate and Ecological Dynamics from IODP Site U1553, South Campbell Plateau. International Conference on Paleoceanography, 2022.

Haynes, L.L. "Student Exhibit Design in an on-Campus Natural History Museum: Engaging Undergraduates in Reflective Science Communication". Northeastern Geological Society of America Meeting, 2022.

*Poniatowski, E., **Haynes, L.L.**, Röhl, U., and IODP Expedition 378 Scientists. "Foraminifera population dynamics in the southern hemisphere during the Eocene hothouse". NE GSA Meeting, 2022.

*King, A., **Haynes, L.L.**, Röhl, U., and IODP Expedition 378 Scientists. "Foraminifera stable isotopes as indicators of water column temperature and carbon cycling during the Eocene". NE GSA Meeting, 2022.

*Mucha, C., **Haynes, L.L.**, Röhl, U., and IODP Expedition 378 Scientists. "Using benthic foraminifera to evaluate the relationship between Eocene hothouse climate fluctuations and orbital cyclicity". NE GSA Meeting, 2022.

Jones, H., Niderbockstruck, B., Röhl, U., and **IODP Expedition 378 scientists**. "Calcareous nannoplankton community composition across multiple early Eocene hyperthermal events at International Ocean Discovery Program (IODP) Site U1553 (Campbell Plateau, SW Pacific)". Submitted to the European Geophysical Union, 2022.

Chicoye, M., Hendy, M., Dunlea, A., and **IODP Expedition 378 Scientists**. "Quantifying XRF Core Scanning Counts Within Different Sediment Matrices: Transitioning from a Nearshore to Farshore Environment at IODP Site U1553". American Geophysical Union (AGU) Fall Meeting, 2021.

Reis, A., Erhardt, A., Fichtner, V., Röhl, U., Thomas, D.J., Childress, L., and **IODP Expedition 378 Scientists**. "Insights into Sulfate Reduction and Carbonate Diagenesis on the Southern Campbell Plateau". AGU Fall Meeting, 2021.

Haynes, L.L. and Hönisch, B. "The Seawater Carbon Inventory at the Paleocene-Eocene Thermal Maximum". AGU Fall Meeting, 2020.

Haynes, L.L., Hönisch, B., Holland, K., Eggins, S.E., and Rosenthal, Y. "Carbon system influences on the planktic foraminiferal Mg/Ca proxy in low seawater Mg/Ca". AGU Fall Meeting, 2019. (Talk)

Harper, D.T., Hönisch, B., Zeebe, R.E., **Haynes, L. L.**, and Zachos, J. "Long-term trends and orbital variability in late Paleocene and early Eocene (LPEE) climate, carbonate chemistry and planktic foraminiferal Mg/Ca". AGU Fall Meeting, 2019.

Ford, H., **Haynes, L.L.**, Farmer, J. R., Hönisch, B., & Raymo, M.E. "A view from the North Pacific: seawater $\delta^{18}\text{O}$ and B/Ca records over the Mid-Pleistocene Transition". AGU Fall Meeting, 2018.

Harper, D., Hönisch, B., Zeebe, R., **Haynes, L.L.**, Thomas, E., and Zachos, J.C. "Surface Ocean Acidification across Eocene Thermal Maximum-2 (ETM-2)". AGU Fall Meeting, 2018.

*Izaguirre, I., **Haynes, L.L.**, and Hönisch, B. "B/Ca derived deep Pacific carbonate ion saturation across the Mid-Pleistocene Transition". AGU Fall Meeting, 2018.

Haynes, L.L. Hönisch, B., Farmer, J., Clementi, V., Ford, H.L., Raymo, M., Goldstein, S.L., Pena, L.D., Yehudai, M., Bickert, T., and Lea, D.W. "The Deep Ocean Carbon System Across the Mid-Pleistocene". Goldschmidt Geochemistry Conference, Boston, MA, 2018. (Talk)

Hönisch, B., Harper, D., **Haynes, L.L.**, Zachos, J.C. and Zeebe, R.E. "Ocean Acidification and Carbon Cycle Perturbations across Eocene Hyperthermals". Goldschmidt Geochemistry Conference, Boston, MA, 2018.

Le Houedec, S., Erez, J., Rosenthal, Y., **Haynes, L.L.**, Hönisch, B., and Zhou, X. "Calcium concentration controls on shell Na/Ca in cultured planktonic foraminifera (*Globigerina siphonifera*)". Goldschmidt Geochemistry Conference, Boston, MA, 2018.

Haynes, L.L., Hönisch, B., Farmer, J., Ford, H.L., Yehudai, M., Raymo, M., Goldstein, S.L., Pena, L.D., and Bickert, T. "Assessing Deep Ocean Carbon Storage Across the Mid-Pleistocene Transition". AGU Fall Meeting, 2017.

Haynes, L.L., Hönisch, B., Farmer, J., Ford, H.L., Yehudai, M., Raymo, M., Goldstein, S.L., Pena, L.D., and Bickert, T. "Deep Equatorial Atlantic Carbon Storage Across the Mid-Pleistocene Transition". PAGES Open Science Meeting, Zaragoza, 2017.

Haynes, L.L., Hönisch, B., Farmer, J., Ford, H.L., Yehudai, M., Raymo, M., Goldstein, S.L., Pena, L.D., and Bickert, T. "Deep Atlantic Carbonate Chemistry Across the Mid-Pleistocene Transition". International Conference on Paleoceanography, Utrecht, 2016.

Hönisch, B. and **Haynes, L.L.** "Estimating the boron isotope/pH sensitivity in ancient marine carbonates." International Conference on Paleoceanography, Utrecht, 2016.

*Clementi, V., **Haynes, L.L.**, Hönisch, B., Costa, K., and McManus, J. "Testing the benthic foraminiferal B/Ca proxy in a hydrothermal vent environment to determine its validity under extreme conditions". AGU Fall Meeting, 2016.

Yehudai, M., Kim, J., Seguí, M.J., Goldstein, S.L., Pena, L.D., **Haynes, L.L.**, Hönisch, B., Farmer, J.R., Ford, H.L., Raymo, M.E., and Bickert, T. "Changes in Equatorial Atlantic Ocean Thermohaline Circulation across the Mid-Pleistocene Transition". AGU Fall Meeting, 2016.

Farmer, J., Hönisch, B., **Haynes, L.L.**, Kroon, D., Bell, D.B., Jung, S., Jaume-Seguí, M.E., Raymo, M.E., Goldstein, S., Pena, D. "Trace element evidence for abrupt changes in deep South Atlantic Ocean nutrient and carbonate chemistry across the Mid-Pleistocene Transition". AGU Fall Meeting, 2016.

Rosenthal, Y., Woodard, S.C., Evans, D.A., **Haynes, L.L.**, Sosdian, S.M., Lear, C.H., Hönisch, B., and Erez, J., "Did the mid Pliocene warmth bring the Northern Hemisphere Chill?" AGU Fall Meeting, 2015. (Talk)

Allen, K.A., Hönisch, B., Eggins, S.M., **Haynes, L.L.**, Rosenthal, Y., & Yu, J. "Sr/Ca of planktic foraminiferal calcite varies with pH and DIC in culture experiments". Geological Society of America Annual Meeting, 2015.

Haynes, L.L., Hönisch, B., Eggins, S.M., Holland, K., Rosenthal, Y. "Calibration of the B/Ca proxy in cultured *O. universa* tests under Paleogene seawater conditions". AGU Fall Meeting, 2014

Haynes, L.L., Hönisch, B., Eggins, S.M., Holland, K., Baptist, C.B., "Calibration of the B/Ca proxy in cultured *O. universa* tests during simulated Paleocene-Eocene ocean acidification". Gordon Research Conference on Ocean Global Change Biology, 2014

Ku, T. C. W., Shackleton, S., Martini, A.M., **Haynes, L.L.**, Gaffey, R., Donovan, A. "The carbon isotope record and early diagenesis of marl lake sediments, Lough Carra, Ireland". Geological Society of America Annual Meeting, 2013. (Talk)

Haynes, L.L. and Gaines, R. "Stratigraphy, geochemistry, and paleoclimatic implications from endogenic marl sediments of the Tule Valley sub-basin of Pleistocene Lake Bonneville". Geological Society of America Annual Meeting, 2013 (Talk)

Haynes, L.L. and Horton, T. "Stable isotope record of a Metro Cave speleothem for the analysis of Pleistocene and Holocene climate change in Westland, New Zealand". Geological Society of America Annual Meeting, 2012