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EDUCATION

Ph.D., M. Phil, M.A.: Columbia University, Dept. of Earth and Environmental Sciences 2013-2020
Sc.B.: Brown University, Geology-Biology, with Honors 2009-2013

RESEARCH EXPERIENCE

Harvard University Mar 2020-Present
Post-Doctoral Fellow. Archaeal lipid paleobarometry proxy development. Advisor: Dr. Ann Pearson

Columbia University Sep 2013-Feb 2020
Doctoral Dissertation: “Noelaerhabdaceae coccolithophores as records of ancient atmospheric CO₂.”
Master’s Thesis: “Reinventing the alkenone $\delta^{13}C$ proxy: constraining biological influences and steps toward a novel core-top calibration.”

Centre Européen de Recherche et d’Enseignement des Géosciences de l’Environnement
Visiting Researcher via Chateaubriand STEM Fellowship. Mentor: Dr. Clara Bolton Jan 2017-Jul 2017

University of Oviedo, Spain May 2014-Jun 2014
Visiting Researcher. Coccolith separation, isolation, and geochemistry. Mentor: Dr. Heather Stoll

Brown University Sep 2012-May 2013
Senior Thesis: “Long-chain Diols as a Lacustrine Paleothermometer: Calibration, Caveats, and Future Possibilities.” Advisors: Dr. James Russell and Dr. Shannon Loomis

Lamont-Doherty Earth Observatory Jun 2012-Aug 2012
REU Intern: The establishment of modern upwelling regions through foraminifer trace metal and stable isotope analyses at ODP Site 716. Advisors: Dr. Peter deMenocal and Dr. Pratigya Polissar

PUBLICATIONS

- Phelps SR, Hennon GMM, Dyhrman ST, Hernández-Limón MD, Williamson OM, Polissar, PJ. Carbon isotope fractionation in Noelaerhabdaceae algae and a critical evaluation of the alkenone paleobarometer. (*in preparation for Geochimica et Cosmochimica Acta*).
- Phelps SR, Stoll HM, Bolton CT, Beaufort L, Polissar PJ. Controls on alkenone carbon isotope fractionation in the modern ocean. (*in preparation for Geochemistry, Geophysics, Geosystems*).
- Polissar, PJ, Uno KT, Phelps SR, Karp AT, Freeman KH, Pensky JL. Hydrologic changes drove the Late Miocene expansion of C₄ grasslands in Northern India. (*in preparation for Paleoclimatology and Paleogeography*).
- Hönisch B, Fish CR, Phelps SR, Haynes LL, Dyez K, Holland K, Fehrenbacher J, Allen KA, Eggins SM, Goes JI. Symbiont photosynthetic competency and its effect on boron proxies in planktic foraminifera. (*in review at Paleoclimatology and Paleogeography*).
- Polissar PJ, Rose CR, Uno KT, Phelps SR, deMenocal P (2020) Reply to: Multiple drivers of Miocene C₄ ecosystem expansions. *Nature Geoscience*, **13**(7), 465-467.
- Currano ED, Jacobs BF, Bush RT, Novello A, Feseha M, Grímsson F, McInerney FA, Michel LA, Pan AD, Phelps SR, Polissar P (2020) Ecological dynamic equilibrium in an early Miocene (21.73 Ma) forest, Ethiopia. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **539**, 109425.
- Gutián J, Phelps S, Polissar PJ, Ausín B, Eglinton TI, Stoll HM (2019) Midlatitude Temperature Variations in the Oligocene to Early Miocene. *Paleoclimatology and Paleogeography*, **34**(8), 1328-1343.
- Polissar PJ, Rose CR, Uno KT, Phelps SR, deMenocal P (2019). Synchronous rise of African C₄ ecosystems 10 million years ago in the absence of aridification. *Nature Geoscience*, **12**(8), 657-660.
- Stoll HM, Gutián J, Hernández-Almeida I, Mejía LM, Phelps S, Polissar P, Rosenthal Y, Zhang H, Ziveri P (2019) Upregulation of phytoplankton carbon concentrating mechanisms during low CO₂ glacial

periods and implications for the phytoplankton pCO₂ proxy. *Quaternary Science Reviews*, **208**, 1-20.
 Andrae JW, McInerney FA, Polissar PJ, Sniderman JMK, Howard S, Hall PA, Phelps SR (2018) Initial expansion of C₄ vegetation in Australia during the Late Pliocene. *Geophysical Research Letters*, **45**, 4831-4840.

AWARDS & HONORS

International Ocean Drilling Program Schlanger Fellowship	2019-2020
Kenneth and Linda Ciriacks Graduate Fellowship in Earth and Environmental Sciences	2017-2018
Chateaubriand STEM Fellowship, French Embassy in the U.S.	2016-2017
National Science Foundation (NSF) Graduate Research Fellowship	2014-2016
S.C. Rosenberger Prize for Service, Research, and Academics, Brown University	2014-2016
NSF Research Experience for Undergraduates at Columbia University	2012

GRANTS AND FUNDING

Graduate Student Mentor, Columbia Undergraduate Scholars Program, AY 2018-2019.
 LDEO Chevron Student Initiative Fund: "Identification and quantification of long-chain alkenones and alkenoates for temperature and haptophyte community reconstructions," Fall 2017. (\$1,596).
 Lamont Climate Center: "Changes in calcareous algal physiology through the Cenozoic," Fall 2015. (\$9,900).
 Sigma Xi: "A novel calibration of the alkenone-pCO₂ proxy," Spring 2014. (\$1,000).
 Geological Society of America Graduate Student Research Grant, Spring 2014. (\$2,200).
 Lamont Climate Center: "A novel calibration of the alkenone-pCO₂ proxy: constraining biological influences," Fall 2013. (\$9,910).

TEACHING EXPERIENCE

Graduate Student Mentor, Columbia Undergraduate Scholars Program	
Columbia Journey Seminar instructor	2018-2019
Teaching Assistant, Columbia University	
EESC UN2100 – Earth's Environmental System: Climate	Sep 2017-Dec 2017
EESC UN1030 – Introduction to Oceanography	Sep 2015-Dec 2015

MENTORING

Rachel Buzeta (Dayton University). NSF REU Intern	Jun 2017-Aug 2017
Jose Guitián (ETH Zurich). Visiting graduate student	Jul 2016, Oct 2016
Jason Swann (Columbia). Summer internship & senior thesis	Jun 2015-May 2016
Margaret Guo (Tenafly, NJ HS). Summer research projects	Jun 2014-Mar 2016
Jennifer Pensky (Barnard College). Earth Institute internship	Jun 2014-Aug 2014

OUTREACH & SYNERGISTICS

Peer reviewer, <i>Geochimica et Cosmochimica Acta</i> ; <i>Organic Geochemistry</i> ; <i>Paleoceanography</i>	
Hillside School (Montclair, NJ) Earth Science Visitor	2017, 2018
Graduate Student Committee Co-Chair	2014-2016
LDEO Biology and Paleo-Environments Seminar Co-Organizer	Sep 2013-May 2016
B&M Fine Arts Studios, Adjunct Instructor	Feb 2014
LDEO Campus Life Committee Member	2014
Brown Geology Department of Undergraduates Co-Chair	2013