

ALLISON T. KARP

335 Deike Building
Pennsylvania State University
University Park, PA 16802 USA

(847) 790-6775
amk6331@psu.edu
www.atkarp.com

Education

Expected 2020 **Doctor of Philosophy, Ph.D. in Geosciences (ABD)**
Pennsylvania State University

Dissertation Title: “The role of fire ecology in vegetation change during the Late-Miocene: New applications of molecular and isotopic proxies for vegetation burning in the paleorecord”
Primary Advisor: Dr. Katherine H. Freeman

2015 **Bachelor of the Arts, A.B. in Biology: Ecology and Evolution; Environmental Earth Science**
Washington University in St. Louis
Graduated *Cum Laude* with Highest Distinction in Earth and Planetary Sciences

Fellowships, Honors, and Awards

2018 European Association of Organic Geochemists (EAOG) Research Award
2017 Third Place, PSU Geoscience Graduate Colloquium, Oral Presentation by a pre-comps PhD student
2016 Charles A. & June R.P. Ross Research Award
2016 Isocamp National Science Foundation (Isocamp-NSF) Participant Award
2016 First Place, PSU Geoscience Graduate Colloquium, Oral Presentation by a pre-comps PhD student
2015-present National Science Foundation Graduate Research Fellowship Program (NSF-GRFP)
2014 I-CARES Certificate in Renewable Energy and the Environment
2011-15 Washington University in St. Louis Dean’s list

Publications

Karp A.T., Behrensmeyer A.K., Freeman K.H., (2018) Grassland fire ecology has roots in the late Miocene. *PNAS* 115 (48).

Undergraduate Thesis

Karp A.T., (2015) Using leaf wax biomarkers to constrain land-use change associated with Mississippian settlements.
Washington University in St. Louis Senior Honors Papers

Grants and Scholarships

2018 Alley Family Graduate Scholarship in Climate Science
2017 Urbino Summer School in Paleoclimatology National Science Foundation (USSP-NSF) Scholarship
2017 Donald B. and Mary E. Tait Scholarship in Microbial Biogeochemistry
2016 Geological Society of America (GSA) Graduate Student Research Grant
2016 Charles E. Knopf, Sr., Memorial Scholarship
2015-18 Paul D. Krynine Scholarship Award

Teaching and Mentoring Experience

2017 **Graduate Mentor**, PSU, Dept. of Meteorology, NSF-REU program in climate science
Undergraduate mentee: Rebecca Miller, Brandeis University

2016 **Teaching Assistant**, Pennsylvania State University course Geoc 040: The Sea Around Us
Professor: Dr. Chris Marone

2015 **Teaching Assistant**, Pennsylvania State University course Geoc 040: The Sea Around Us
Professor: Dr. Liz Hajek

Science Outreach

2016-present **Science Communication Working Group**, WE ARE for Science Advocacy Organization

2015-present **Mentor-mentee program co-coordinator (2018); Secretary (2016)**; Association of Women in Geosciences

- 2015-present **Science Mentor**, Pennsylvania State University Science University
- 2009-11 **Guest Engagement Volunteer**, John G. Shedd Aquarium in Chicago, IL

Analytical and Field Experience

- 2015-present **Graduate Researcher**, Freeman Isotope Biogeochemistry Lab at PSU
- 2018 **Visiting Adjunct Researcher**, WA-OIGC at Curtin University of Technology, Australia
- 2016 **Graduate Researcher**, PSU-Croatian Geological Survey Holocene Lake Coring Archeological Collaboration
- 2013-15 **Undergraduate Researcher**, Bradley Organic Biochemistry Lab at Wash U in St. Louis
- 2012 **Undergraduate Research Assistant**, Fike Stable Isotope Biogeochemistry Lab at Wash U in St. Louis

Invited Talks

- Mar 16th 2019 Early Career Scientists Symposium, Department of Ecology & Evolutionary Biology, University of Michigan
- Feb 13th 2019 Climate Dynamics seminar series, Earth System Science Center, Pennsylvania State University
- Sep 21st 2018 Sprigg Center Seminar, Department of Earth Sciences, University of Adelaide, Australia

Selected Conference Abstracts

- Karp A.T.**, Uno K.T., Polissar P.J., Freeman K.H. (2018) Fire Distinguishers: Molecular and isotopic tools for identifying grassland burning in deep time. 2018 AGU Annual Meeting Washington, D.C. (Talk)
- Karp A.T.**, Behrensmeyer A.K., Freeman K.H., (2017) Molecular evidence suggests an active fire-feedback triggered Late Miocene C4 grassland expansion on the Indian Subcontinent. 2017 GSA Annual Meeting Seattle, WA (Talk)
- Karp A.T.**, Miller R., Miko S., Ilijanić N., McClure S., Kennett D., Freeman K.H. (2017) Linking the Neolithic farmers of Dalmatia to their paleoenvironment: A preliminary carbon analysis of paleolake sediments. PSU Human Ecology Symposium (Poster)
- Karp A.T.**, Freeman K.H. (2017) Molecular evidence for fire and forest clearing associated with C4 grassland expansion in the Late Miocene. 2017 GSA Joint Section Meeting NENC (Talk)
- Karp A.T.**, Suess M., Bradley A.S., (2014). Using leaf wax biomarkers to constrain land-use change associated with Mississippian settlements. 2014 Midwest Geobiology Symposium (Poster)

Short Courses and Workshops

- 2018 Biomarker Informatics Workshop at LDEO Columbia University (Participant)
- 2017 The Urbino Summer School in Paleoclimatology at University of Urbino, Italy (Student)
- 2016 Stable Isotope Biogeochemistry and Ecology “Isocamp” at University of Utah (Student)

Field Courses

- 2017 Graduate Field Course: Marine Biogeochemistry PSU & San Salvador Gerace Research Center (Student)
- 2016 Graduate Field Course: Carbonate Field Stratigraphy PSU & Guadalupe Mt. National Park (Student)
- 2015 Undergraduate Field Course: The Geology of Italy Wash U in St. Louis EPSci Dept. (Student)
- 2014 Overseas Ecology Field Study, University of Queensland Brisbane, Australia
- 2013 Kaua’i Paleocology/Archeology Field School U Hawai’i at Manoa & Nat’l Botanic Garden (Student)
- 2011-14 Undergraduate Intensive Study, Wash U in St. Louis Pathfinder Program in Environmental Sustainability

Professional Activities and Service

Reviewer

- Climates of the Past

Professional Society Memberships

- Geological Society of America
- American Geophysical Union (Paleoceanography and Paleoclimatology section)
- Association for Women Geoscientists

Departmental Service

2018 Graduate student representative at PSU Dept. of Geosciences faculty meetings
2015-17 PSU Dept. of Geosciences Welcome Picnic Committee Chair

Certifications

- PADI Open Water Diver
- NAUI Advanced Diver
- NAUI Deep Diver
- NAUI EANx Diver
- NAUI Rescue Diver
- AAUS Scientific Diver (all but written exam)
- American Red Cross First Aid certification/CPR/AED
- NAUI First Aid for Dive Professionals
- Wilderness Medical Institute Wilderness First Aid