

Clay Tabor

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Storrs, CT 06269
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Professional Positions

Assistant Professor, Center for Integrative Geosciences, University of Connecticut 2018-present
Postdoc, Advanced Study Program Fellow, National Center for Atmospheric Research 2016-2017

Education

PhD, Earth and Environmental Sciences - Paleoclimatology, University of Michigan 2015
BS, Atmospheric Sciences with Minor in Mathematics, University of North Carolina at Asheville 2009

Drafted Manuscripts

Goddard, P. & **Tabor, C.R.** (2019). Drivers of isotopic variability over the West Antarctic Ice Sheet. (in prep)
Hu, J., Emile-Geay, J., **Tabor, C.R.**, Nusbaumer, J., Partin, J., Adkins, J., & Cobb, K. (2019). Flowstone hieroglyphics: deciphering Asian speleothems with an isotope-enabled climate model. (in prep)
Lopez-Maldonado, R., Ellis, A., Bader, N., Ramirez, P., **Tabor, C.R.**, Bateman, J., Jesmok, G., Upadhyay, D., Mitsunaga, B., Elliott, B., Lora, J., & Tripathi, A. (2019). Paleoclimate changes in the Pacific Northwest over the past 36,000 years from clumped isotope measurements of paleosols from the palouse loess. (in prep)
Yasuhara, M., Wei, C., Costello, M., Bonebrake, T., **Tabor, C.R.**, Baselga, A., Kiessling, W., Kretschmer, K., Kusumoto, B., & Kubota, Y. (2019). Equatorial marine diversity crisis in the warming world. (in prep)

In Review Manuscripts

Stevenson, S., Otto-Bliesner, B., Brady, E., Nusbaumer, J., **Tabor, C.R.**, Tomas, R., Noone, D., & Liu, Z. (2019). Volcanic eruption signatures in the isotope-enabled last millennium ensemble. (in review)
Liu, Z., Selby, D., Horton, D., **Tabor, C.R.**, Sageman, B., & Percival, L. (2019). Twice the bang: Climate Perturbations of the Paleocene–Eocene Thermal Maximum by comet impact and volcanism. *Geology* (in review)
Tabor, C.R., Bardeen, C.G., Otto-Bliesner, B.L., Garcia, R., & Toon, O.B. (2019). Causes and consequences of the end-Cretaceous impact winter. *Science Advances* (in review)
Chang, Q., Hren, M., Lin, A.T., **Tabor, C.R.**, Yu, S., Yvette, E., & Harris, G. (2019). The biomarker stable isotope record for the late Quaternary climate change in Southwestern Taiwan. *Global and Planetary Change*. (in review)
Brady, E., Stevenson, S., Baily, D., Liu, Z., Noone, D., Nusbaumer, J., Otto-Blienser, B., **Tabor, C.R.**, Tomas, R., Wong, T., Zhang, J., & Zhu, J. (2019). The connected isotopic water cycle in the Community Earth System Model. *Journal of Advances in Modeling Earth Systems*. (in revision)
Tabor, C.R., Feng, R., & Otto-Bliesner, B.L. (2019). Climate responses to the splitting of a supercontinent: Implications for the breakup of Pangea. *Geophysical Research Letters*. (in revision)

Published Manuscripts

- Thibodeau, B., Not, C., Zhu, J., Schmittner, A., Noone, D., **Tabor, C.R.**, Zhang, J., & Liu, Z. (2018). Last century warming over the Canadian Atlantic shelves linked to weak Atlantic Meridional Overturning circulation, *Geophysical Research Letters*.
- Tabor, C.R.**, Otto-Bliesner, B.L., Brady, E., Nusbaumer, J., Zhu, J., Erb, M. Wong, A., Liu, Z., & Noone, D. (2018). Interpreting precession driven $\delta^{18}\text{O}$ variability in the South Asian monsoon region, *Journal of Geophysical Research: Atmospheres*.
- Super, J. R., Chin, K., Pagani, M., Li, H., **Tabor, C. R.**, Harwood, D., & Hull, P. M. (2018). Late Cretaceous climate in the Canadian Arctic: multi-proxy constraints from Devon Island. *Palaeogeography, Palaeoclimatology, Palaeoecology*.
- Zhu, J., Liu, Z., Brady, E., Otto-Bliesner, B., Zhang, J., Noone, D., & **Tabor, C. R.** (2017). Reduced ENSO Variability at the LGM Revealed by an Isotope-enabled Earth System Model. *Geophysical Research Letters*.
- Feng, R., Otto-Bliesner, B. L., Fletcher, T. L., **Tabor, C. R.**, Ballantyne, A. P., & Brady, E. C. (2017). Amplified Late Pliocene terrestrial warmth in northern high latitudes from greater radiative forcing and closed Arctic Ocean gateways. *Earth and Planetary Science Letters*.
- The DeepMIP Model and Data Community: DeepMIP (2017). The DeepMIP contribution to PMIP4: experimental design for model simulations of the EECO, PETM, and pre-PETM (version 1.0). *Geoscientific Model Development*.
- Tabor, C. R.**, Poulsen, C. J., Lunt, D. J., Rosenbloom, N. A., Otto-Bliesner, B. L., Markwick, P. J., & Feng, R. (2016). The cause of Late Cretaceous cooling: A multimodel-proxy comparison. *Geology*.
- Petersen, S. V., **Tabor, C. R.**, Lohmann, K. C., Poulsen, C. J., Meyer, K. W., Carpenter, S. J., & Sheldon, N. D. (2016). Temperature and salinity of the Late Cretaceous Western Interior Seaway. *Geology*.
- Tabor, C. R.**, & Poulsen, C. J. (2016). Simulating the mid-Pleistocene transition through regolith removal. *Earth and Planetary Science Letters*.
- Poulsen, C. J., **Tabor, C. R.**, & White, J. D. (2015). Long-term climate forcing by atmospheric oxygen concentrations. *Science*.
- Poulsen, C. J., **Tabor, C. R.**, & White, J. (2016). Response to Comment on “Long-term climate forcing by atmospheric oxygen concentrations”. *Science*.
- Fiorella, R. P., Poulsen, C. J., Pillco Zolá, R. S., Barnes, J. B., **Tabor, C. R.**, & Ehlers, T. A. (2015). Spatiotemporal variability of modern precipitation $\delta^{18}\text{O}$ in the central Andes and implications for paleoclimate and paleoaltimetry estimates. *Journal of Geophysical Research: Atmospheres*.
- Tabor, C. R.**, Poulsen, C. J., & Pollard, D. (2015). How obliquity cycles powered early Pleistocene global ice-volume variability. *Geophysical Research Letters*.
- Tabor, C. R.**, Poulsen, C. J., & Pollard, D. (2014). Mending Milankovitch's theory: obliquity amplification by surface feedbacks. *Climate of the Past*.

Grants

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| Blue Waters Dear Colleague Letter: Multi-Time-Scale Climate Dynamics in California: An Integrated Multi-Proxy Stalagmite, Monitoring, and Modeling Approach – 21 million core hours and \$2,140 awarded | 2019 |
| Evaluating Climate Change and Kill Mechanisms Associated with the End-Cretaceous Mass Extinction: A Model-Data Comparison Approach - \$520,954 pending | 2019 |
| NCAR Large University Allocation: California Megadroughts in Context: Integrating High Resolution Speleothem Records with Isotope-enabled Climate Models – 10 million CPU hours | 2018 |

CAREER: Deconvolution of marine isotopic variability with an isotope-enabled Earth system model to constrain ice volume and temperature since the Pliocene - \$585,127 declined	2018
Multi-Time-Scale Climate Dynamics in California: An Integrated Multi-Proxy Stalagmite, Monitoring, and Modeling Approach – \$133,319 awarded	2018
PAGES Young Scientists Meeting Travel Grant	2017
NCAR Strategic Capability Allocation – 15 million CPU hours	2016 / 2017
NCAR Advanced Study Program Fellowship – \$124,000 awarded	2015
GSA Travel Grant	2014
Rackham Graduate Student Travel Grant	2012-2015
Community Earth System Model Tutorial Travel Grant	2012

Invited Talks

- Tabor, C.R.:** Isotopic change of the deglaciation, *The Future of Past Climate*, Aspen Global Change Institute, 2019.
- Tabor, C.R.:** Mechanisms for an impact winter, *Department of Environmental Sciences, Rutgers University*, New Brunswick, NJ, 2019.
- Tabor, C.R.:** Drivers and consequences of the end-Cretaceous impact winter, *Institute of Atmospheric Physics, Chinese Academy of Sciences*, Beijing, China, 2018.
- Tabor, C.R.:** Paleoclimate at NCAR, *NSF Geosciences Division Review of the National Center for Atmospheric Research*, Boulder, CO, 2017.
- Tabor, C.R.:** Exploring the K-Pg with CESM, *Deep Time Workshop*, Santa Cruz, CA, 2016.
- Tabor, C.R.:** Using an Earth system model to better understand ice sheet variability through the Pleistocene, *American Geophysical Union Fall Meeting*, San Francisco, CA, 2015.
- Tabor, C.R.:** Modeling the Pleistocene glacial cycles, *Department of Earth and Planetary Sciences, Johns Hopkins University*, Baltimore, MD, 2015.
- Tabor, C.R.:** Implementation of GIS for the NWS and other regional decision makers, 30th Anniversary Symposium, *Department of Atmospheric Sciences, University of North Carolina at Asheville*, Asheville, NC, 2009.
- Tabor, C.R.:** GIS and atmospheric sciences: bridging the gap, *National Environmental Modeling and Analysis Center*, Asheville, NC, 2008.

Department Seminars

- Tabor, C.R.:** Changes in the South Asian monsoon region on orbital timescales, *Department of Geography, University of Connecticut*, Storrs, CT, 2018.
- Tabor, C.R.:** Understanding orbitally driven $\delta^{18}\text{O}$ variability in the South Asian monsoon region, *Department of Physics, University of Connecticut*, Storrs, CT, 2018.
- Tabor, C.R.:** Reconstructing Late Cretaceous climate evolution with Earth system models, *Department of Earth Sciences, University of Hong Kong*, Hong Kong, 2017.
- Tabor, C.R.:** Reconstructing Late Cretaceous climate evolution with Earth system models, *Center for Integrative Geosciences, University of Connecticut*, Storrs, CT, 2017.
- Tabor, C.R.:** Reconstructing Late Cretaceous climate evolution with Earth system models, *Center for Climate Physics, Institute for Basic Science*, Busan, South Korea, 2017.

Presentations

- Tabor, C.R.,** Lofverstrom, M., Montanez, I., Oster, J., Wortham, B., de Wet, C.: A mechanistic understanding of precipitation isotopic changes in the Western United States since the LGM, European Geosciences Union, 2019.

- Tabor, C.R.**, Bardeen, C., Otto-Bliesner, B.L., Garcia, R., & Toon, B.: Comparing the causes of end-Cretaceous impact winter with an Earth system model, American Geophysical Union Fall Meeting, 2018.
- Atwood, A., Cobb, K., Chiang, J., Grothe, P., **Tabor, C.R.**, Otto-Bliesner, B., Sayani, H., Jones, A., & Hitt, N.: Tropical Pacific climate over the last 6,500 years – insights from a coral ensemble approach and an isotope enabled GCM, American Geophysical Union Fall Meeting, 2018.
- Batemam, J., Jesmok, G., Elliot, B., Lora, J., Mitsunaga, B., Lopez-Maldonado, R., Ellis, A., **Tabor, C.R.**, Bader, N., Upadhyay, D., Ramirez, P., & Tripathi, A.: Analysis of clumped isotopes in loess-derived calcareous paleosols: The Pacific Northwest climate from LGM to today, American Geophysical Union Fall Meeting, 2018.
- Goddard, P., & **Tabor, C.R.**: The atmospheric drivers of the Amundsen Sea Low variability and the resultant influence on stable water isotopic records in West Antarctic: A study of observations and simulations, American Geophysical Union Fall Meeting, 2018.
- Hu, J., Emile-Geay, J., **Tabor, C.R.**, & Nusbaumer, J.: The interpretation of speleothem $\delta^{18}\text{O}$ in the Asian Monsoon regions: Insights from an isotope-enabled model, American Geophysical Union Fall Meeting, 2018.
- Wortham, B., Montanez, I., Swart, P., & **Tabor, C.R.**: Fossilized drip-water from a Sierra Nevada Cave reveals variability in precipitation sources and atmospheric dynamics over the last deglaciation, American Geophysical Union Fall Meeting, 2018.
- Tabor, C.R.**, & CESM Isotope Tracer Development Group: Far Field Isotopic Signatures of a Green Sahara, Goldschmidt, 2018.
- Wortham, B., Montanez, I., Swart, P., Mukhopadhyay, S., & **Tabor, C.R.**: A multi-proxy approach to understanding hydroclimate in the American Southwest, Goldschmidt, 2018.
- Tabor, C.R.**: Variability of the South Asian Monsoon on Orbital Timescales. Presentation for the Avery Point Modeling Workshop, 2018.
- Wortham, B., Montanez, I., Swart, P., & **Tabor, C.R.**: Fossilized drip-water from a Sierra Nevada Cave, USA reveals changing conditions over the North Pacific during the last deglaciation, European Geophysical Union General Assembly, 2018.
- Bardeen, C., **Tabor, C.R.**, Otto-Bliesner, B.L., Garcia, R., & Toon, B.: Soot deposition following the Chicxulub impact: Comparing to data from 66 million years ago, Whole Atmosphere Working Group Meeting, 2018.
- Atwood, A., Cobb, K., Chiang, J., Grothe, P., **Tabor, C.R.**, Otto-Bliesner, B., Sayani, H., Jones, A., & Hitt, N.: The Influence of Mean State Changes on ENSO During the Mid-Holocene: Insights from Coral Records and an Isotope-Enabled GCM, Ocean Sciences Meeting, 2018.
- Tabor, C.R.**, Otto-Bliesner, B.L., Brady, E.C., Feng, R., Nusbaumer, J., Zhu, J., & the iCESM Project Members: Understanding the $\delta^{18}\text{O}$ Response to Precession in the South Asian Monsoon Region, American Geophysical Union Fall Meeting, 2017.
- Tabor, C.R.**, Otto-Bliesner, B.L., Brady, E.C., Feng, R., Nusbaumer, J., Zhu, J., & the iCESM Project Members: Interpreting Speleothem Records from the Asian Monsoon Region with iCESM, CESM Workshop, 2017.
- Tabor, C.R.**, Otto-Bliesner, B.L., Brady, E.C., Feng, R., Nusbaumer, J., Zhu, J., & the iCESM Project Members: Understanding $\delta^{18}\text{O}$ variability in monsoon regions using an earth system model, 5th PAGES Open Science Meeting, 2017.
- Tabor, C.R.**, Otto-Bliesner, B.L., Brady, E.C., Feng, R., Nusbaumer, J., Zhu, J., & the iCESM Project Members: The large scale responses of water isotopes to changes in earth's orbit, 3rd PAGES Young Scientists Meeting, 2017.

- Tabor, C.R.**, Otto-Bliesner, B.L., Brady, E.C., & Erb, M.P.: The role of orbital variability on the distribution of water isotopes in the Quaternary, American Geophysical Union Fall Meeting, 2016.
- Tabor, C.R.** & the iCESM Project Members: Oxygen-18 and Deuterium Isotopes in CESM, Deep Time Workshop, Santa Cruz, CA, 2016.
- Poulsen C.J. and **Tabor, C.R.**: Late Cretaceous climate evolution from a modeling prospective, The Geological Society of America Annual Meeting, 2016.
- Tabor, C.R.**, Bardeen, C., Otto-Bliesner, B.L., Garcia, R., Toon, B., & Poulsen, C.J.: Simulating the K-Pg with an Earth system model, The Geological Society of America Annual Meeting, 2016.
- Press:** Sumner, T. Devastation detectives try to solve dinosaur disappearance. Science News, 2017.
- Tabor, C.R.**, Bardeen, C., Otto-Bliesner, B.L., Garcia, R., Toon, B., & Poulsen, C.J.: The large scale climate responses to the Chicxulub impact, CESM Workshop, 2016.
- Peterson, S.V., **Tabor, C.R.**, Meyer, K.W., Lohmann, K.C., & Poulsen, C.J.: Equator to pole in the Cretaceous: A comparison of clumped isotope data with CESM model runs, American Geophysical Union Fall Meeting, 2015
- Tabor, C.R.**, & Poulsen, C.J.: The Role of Paleogeography and CO₂ in Late Cretaceous Ocean Circulation, American Geophysical Union Fall Meeting, 2015.
- Peterson, S.V., **Tabor, C.R.**, Carpenter, S.J., Meyer, K.W., Lohmann, K.C., & Poulsen, C.J.: A Fresh Look: Salinity and Temperature of the Western Interior Seaway using the Clumped Isotope Paleothermometer, The Geological Society of America Annual Meeting, 2015
- Tabor, C.R.**, Poulsen, C.J., Lunt, D.J., Otto-Bliesner, B.L., Rosenbloom, N., & Markwick, P.J.: Simulating climate response to changes in paleogeography through the Cretaceous, CESM Workshop, 2015.
- Tabor, C.R.**, Poulsen, C.J., & Pollard, D.: Regolith as a mechanism for the mid-Pleistocene transition, Michigan Geophysical Union, 2015.
- Tabor, C.R.**, Poulsen, C.J., & Pollard, D.: The potential role of regolith in the mid-Pleistocene transition, American Geophysical Union Fall Meeting, 2014.
- Tabor, C.R.**, Poulsen, C.J., Lunt, D.J., Otto-Bliesner, B.L., Rosenbloom, N., & Markwick, P.J.: Simulating Cenomanian climate with the Community Earth System Model, The Geological Society of America Annual Meeting, 2014.
- Tabor, C.R.**, Poulsen, C.J., & Pollard, D.: Surface feedbacks mend Milankovitch theory, Michigan Geophysical Union, 2013.
- Lunt, D.J., Otto-Bliesner, B.L., Poulsen, C.J., Rosenbloom, N., & **Tabor, C.R.**: Pre-Pliocene PMIP working group: results so far, and questions for discussion, Paleoclimate Modeling Intercomparison Project: Second General Meeting, 2014.
- Rosenbloom, N., Otto-Bliesner, B.L., Brady, E.C., Lunt, D.J., Poulsen, C.J., & **Tabor, C.R.**: CESM for deep time paleoclimate, Paleoclimate Modeling Intercomparison Project: Second General Meeting, 2014.
- Tabor, C.R.**, Poulsen, C.J., & Pollard, D.: Using a complex earth system model to replicate the ice volume signal of the early Pleistocene, American Geophysical Union Fall Meeting, 2013.
- Tabor, C.R.**, Poulsen, C.J., & Pollard, D.: Modeling the North American ice sheet response to changes in precession and obliquity, American Geophysical Union Fall Meeting, 2012.
- Squires, M.F., Baldwin, R., Reid, G., **Tabor, C.R.**, & Wilson, A.: Development a GIS snowstorm database, American Meteorological Society Annual Meeting, 2009.
- Tabor, C.R.** & Dobson, G.; Creating geospatial decision support tools for regional decision makers, North Carolina Geographic Information Systems Conference, 2009.

Squires, M.F., Lawrimore, J.H., Heim, R.R., Robinson, D.A., Gerbush, M., Estilow, T., **Tabor, C.R.** & Wilson, A.: Development of new snowstorm indices and databases at the National Climatic Data Center, Annual Climate Diagnostics and Prediction Workshop, 2009.

Miller, D., Perry, B., Yuter, S., Lee, L., Keighton, S., & **Tabor, C.R.**: Snowfall accumulation forecasting challenges for the southern Appalachians, National Weather Association Annual Meeting, 2008.

Chaired Sessions

American Geophysical Union: *Water Isotopes Systematics* 2018

Goldschmidt: *Understanding Past and Present Climate with Water Isotopes* 2018

Advisees

Queenie Chang / Rebecca Vanderleest - Qualifying exam committee 2018/2019

Paul Goddard – Postdoc 2018-Current

Mackenzie Blanus – Undergrad Committee 2018-Current

Adrian Tasistro-Hart (Princeton) - Undergrad Mentoring 2016

Honors and Awards

NCAR Advanced Study Program Fellowship 2015

Summa Cum Laude 2009

Undergraduate Research Scholar at the University of North Carolina at Asheville 2009

Academic Excellence in the Department of Atmospheric Sciences at the University of North Carolina at Asheville 2009

Excellence in Research in the Department of Atmospheric Sciences at the University of North Carolina at Asheville 2009

G. Herbert Stout Award for Innovative Student Papers 2009

Professional Experience

Grant Writing Workshop, University of Connecticut, Storrs, CT 2018

Evidence-Based Introduction to Teaching, University of Colorado, Boulder, CO 2017

3rd PAGES Young Scientists Meeting, Morillo de Tou, Spain 2017

Graduate Student Research Assistant, University of Michigan, Ann Arbor, MI 2010-2015

Visiting Researcher, National Center for Atmospheric Research, Boulder, CO 2013

Community Earth System Model Tutorial, National Center for Atmospheric Research, Boulder, CO 2012

National Climatic Data Center Internship, Asheville, NC 2009- 2010

National Environmental Modeling and Analysis Center Intern, Asheville, NC 2008-2009

Undergraduate Research Assistant, University of North Carolina at Asheville, Asheville, NC 2008-2009

Teaching Experience

Our Evolving Atmosphere Fall 2019

Paleoclimatology Fall/Spring 2018/
Spring 2019

Physical Oceanography, University of Michigan Fall 2014

Introductory Environmental Science in the Rockies at the University of Michigan Summer 2014
Camp Davis Field Station in Jackson, WY

Introductory Environmental Science in the Rockies at the University of Michigan Camp Davis Field Station in Jackson, WY	Summer 2012
Global Change 1, University of Michigan	Fall 2011
Geology of National Parks, University of Michigan	Fall 2010

Service

University of Connecticut Geography Curriculum Committee	2019
University of Connecticut Geosciences Curriculum Committee	2019
University of Connecticut Geography APIR Search Committee	2019
University of Connecticut Big Data Task Force Committee Member	2019-present
University of Connecticut Open House: Center for Integrative Geosciences Rep	2018
University of Connecticut Geography Undergraduate Committee	2018
University of Connecticut Environmental Sciences Advisory Board	2018
CISL High Performance Computing Allocation Panel Member	2017-present
Climate of the Past: Guest editor	2017-2018
Arctic Climate Game Jam: Organizer	2017
CESM Tutorial: Student Mentor	2017
American Geophysical Union Fall Meeting OSPA Judge	2016-2018
CESM Tutorial: Presented on CESM Deep-Time Capability	2016
Advised for NCAR's Public Climate Exhibit	2016
Undergraduate Leadership Workshop: Careers in Atmospheric Sciences panel	2016
NCAR Advanced Study Program: Member of the Postdocs Networking Committee	2016-2017
Michigan Geophysical Union: Member of the Planning Committee	2015
University of Michigan Research Symposium for Graduate Recruiting: Presented	2014
Made a Kiosk on Ice Ages for the University of Michigan's Natural History Museum	2014
Reviewer: <i>Science Advances</i> , <i>Nature Communications</i> , <i>Nature Scientific Data</i> , <i>Nature Scientific Reports</i> , <i>Geophysical Research Letters</i> , <i>Geology</i> , <i>Paleoceanography and Paleoclimatology</i> , <i>Journal of Geophysical Research-Earth Surfaces</i> , <i>Journal of Geophysical Research-Atmospheres</i> , <i>Global and Planetary Change</i> , <i>Climate of the Past</i>	

Memberships

Geological Society of America	2013-present
American Geophysical Union	2012-present
European Geophysical Union	2018-present