

# Katherine Colby Glover

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## Education

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- 2016** Ph.D. in Geography, University of California – Los Angeles, Los Angeles, CA, USA  
**2004** M.S. in Geology, University of Cincinnati, Cincinnati, OH, USA  
**2001** B.A. *cum laude* in Geology, DePauw University, Greencastle, IN, USA

## Professional Positions

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- 2019–present **Instructor**, Climate Change Institute, Women Gender and Sexuality Studies, and School of Ecology and Biology, University of Maine  
2019–present **Instructor**, School of Biodiversity Conservation, Unity College  
2017–2019 **Postdoctoral Research Associate**, Climate Change Institute, Univ Maine  
2017 **Naturalist**, Sequoia Field Institute, Sequoia-Kings Canyon National Parks  
2005-2011 **Science Teacher**, Earth Science, Charlotte Catholic High School  
2007-2010 **Senior Park Aide**, Henry W. Coe State Park, CA Dept of Parks and Recreation  
2003-2004 **Laboratory Supervisor**, Quaternary/Surface Process Research Group, University of Cincinnati

## Peer-Reviewed publications

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- in progress* [11] Kahanamoku-Meyer, S. S., **Glover, K.C.**, Oster, J. L., Kearns, F. R. and Paleo-to-Policy workshop signatories (*in prep*). Collaborative paleo science for an era of climate crisis. *EOS: Transactions of the American Geophysical Union*.
- 2020 [10] **Glover, K. C.**, Chaney, A., Kirby, M. E., Patterson, W., MacDonald, G. M., 2020. Southern California vegetation, wildfire and erosion had nonlinear responses to climatic forcing during Marine Isotope Stages 5 - 2 (120 – 15 ka). *Paleoceanography and Paleoclimatology*. DOI: 10.1029/2019PA003628  
*This work was selected for a Research Spotlight in EOS, the news publication for the American Geophysical Union.*
- 2018 [9] Kirby, M. K., Patterson, W. P., Ivanovici, L., Sandquist, D., **Glover, K. C.**, 2018. Evidence for a large middle Holocene flood event in the Pacific southwestern United States. *in* Starratt, S.W., and Rosen, M.R., eds., *From Saline to Freshwater: The Diversity of Western Lakes in Space and Time*. Geological Society of America Special Publication, 536. DOI: 10.1130/2018.2536(09).
- [8] Koch, A., **Glover, K.C.**, Zambri, B., Thomas, E.K., Benito, X., Yang, J.Z., 2018. Open data practices and challenges among early career paleo-researchers. *Past Global Changes Magazine* 26:2, 54-55. DOI: 10.22498/pages.26.2.54
- [7] Field, R.D., Fernandes, K., **Glover, K.C.**, Hansen, W.D., Rabinowicz, J., Williams, A.P., 2018. Understanding the roles of fuels, climate and people in predicting fire: taking the long view. *Past Global Changes Magazine* 26:1, 41. DOI:

*Updated Mar 2020*

- 10.22498/pages.26.1.41
- [6] Kirby, M., Heusser, L., Scholz, C., Ramezan, R., Anderson, M., Markle, B., Rhodes, E., Fantozzi, J., **Glover, K.C.**, Hiner, C., Price, B., Rangel, H., 2018. A late Wisconsin (32-10k cal a BP) history of pluvials, droughts, and vegetation in the Pacific southwest United States (Lake Elsinore, CA). *Journal of Quaternary Science*. DOI: 10.1002/jqs.3018
- 2017 [5] **Glover, K. C.**, 2017. Teaching California climate and vegetation change over long timescales: an NGSS unit using CalFlora and the Neotoma Paleoecology Database. *The California Geographer* 56, 97 – 103.  
Teaching module available at:  
<http://serc.carleton.edu/neotoma/activities/174249.html>
- [4] **Glover, K. C.**, MacDonald, G. M., Kirby, M. E., Rhodes, E., Stevens, L., Silveira, E., Whittaker, A., and Lydon, S., 2017. Evidence for orbital and North Atlantic climate forcing in alpine Southern California between 125 – 10 ka from multi-proxy analyses of Baldwin Lake. *Quaternary Science Reviews* 167, 47-62. DOI: 10.1016/j.quascirev.2017.04.028
- 2011 [3] **Glover, K. C.**, Lowell, T. V., Wiles, G., Pair, D., Applegate, P., Hajdas, I., 2011. Deglaciation, basin formation, and post-glacial climate change from a regional network of sediment core sites in Ohio and Eastern Indiana. *Quaternary Research* 76, 401-410. DOI: 10.1016/j.yqres.2011.06.004
- 2009 [2] Lowell, T. V., Fisher, T. G., Hajdas, I., **Glover, K.**, Loope H., Henry, T., 2009. Radiocarbon deglaciation chronology of the Thunder Bay, Ontario area and implications for ice sheet retreat patterns. *Quaternary Science Reviews* 28, 1597-1607. DOI: 10.1016/j.quascirev.2009.02.025
- 2005 [1] Lowell, T. V., Fisher, T. G., Comer, G., Hajdas, I., Waterson, N., **Glover, K.**, Loope, H. M., Shaefer, J., Rinterknecht, V., Broecker, W., Denton, G., and Teller, J. T., 2005. Testing the Lake Agassiz Meltwater Trigger for the Younger Dryas. *Eos* 86 (40), 365-373. DOI: 10.1029/2005EO400001

## Invited Talks

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- 2019 [10] Inclusion in Climate Change and Paleoenvironmental Research. Society of Woman Geographers Conference, Library of Congress, Washington D.C.
- [9] What do paleorecords tell us about ice age environments in North America, and how can they inform future policy? Department of Biology, Kenyon College.
- 2018 [8] Summit-to-Sea Clues for Southern California's Ice Age Climate and Vegetation. School of Biology and Ecology, University of Maine.
- 2017 [7] Glacial-Interglacial Cycles in California. Department of Environmental and Ocean Sciences, University of San Diego.
- [6] Southern California Climate and Vegetation over the past 125,000 years from lake sequences in the San Bernardino Mountains. Geology, Minerals, Energy, and Geophysics Science Center Seminar, Menlo Park U.S. Geological Survey.
- [5] Glacial paleoclimate change from North American Midwest and alpine Southern California lake sequences, Department of Earth Sciences, Indiana University Purdue University – Indianapolis.
- 2016 [4] Insights into hydroclimatic variability of Southern California since 125 ka, from multi-proxy analyses of alpine lake records. Department of Geological Sciences Colloquium Series, California State University – Fullerton.
- 2015 [3] Lake sequences from Big Bear Valley in the San Bernardino Mountains provide

- insight into S. California paleoclimate over the past 100,000 years. Society of Woman Geographers, Southern California chapter.
- [2] Insight into Southern California paleohydrology since Marine Isotope Stage 5c (c. 96 ka) from lakes in the Big Bear Valley, San Bernardino Mountains, California. Department of Earth Sciences, University of Southern California.
- 2014 [1] Lake sequences from Big Bear Valley in the San Bernardino Mountains provide insight into S. California paleoclimate over the past 100,000 years. Department of Earth Sciences Colloquium Series, University of Minnesota.

## **Contributed Scientific Presentations**

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*First-author presentations, with invited papers and awards noted in bold.*

- 2019 [29] Glover, K.C. Vegetation Change at the La Brea Tar Pits from 50,000 to 30,000 years BP. Borns Symposium, Climate Change Institute, University of Maine, Orono, ME (talk)
- [28] Glover, K.C., Gill, J.L., Blois, J., Lindsey, E., Farrell, A., Yeakel, J., Mason, M., Carroll, C. Models and macrofossils: integrating Rancho La Brea's plant collection with dynamic vegetation modeling during Marine Isotope Stage 3. Pacific Climate Workshop, Pacific Grove, CA. (poster)
- 2018 [27] Glover, K.C., Gill, J.L., Blois, J., Lindsey, E., Farrell, A., Yeakel, J., Mason, M., Carroll, C. Models and macrofossils: integrating Rancho La Brea's plant collection with dynamic vegetation modeling during Marine Isotope Stage 3. American Geophysical Union Fall Meeting, Washington, D.C. (poster)
- [26] Glover, K.C. Vegetation Cover and climate at the Rancho La Brea Tar Pits, Southern California, during Marine Isotope Stage 3. Borns Symposium, Climate Change Institute, University of Maine, Orono, ME (talk)
- [25] Glover, K.C. Clues for Southern California's past hydroclimate: from summit to sea level. Paleochronology Building Workshop II, Campeche City, Campeche, Mexico (talk)
- 2017 [24] Glover, K.C. Vegetation and fire in the San Bernardino Mountains, Southern California, since 120,000 years BP: Insights and challenges for 21<sup>st</sup> century predictions. Conference on Fire Prediction Across Scales, The Columbia Initiative on Extreme Weather and Climate, New York, NY (talk)
- [23] Glover, K.C. Patterns, challenges, and future research potential from the West Coast paleovegetation record over the last 130 ka. Pacific Climate Workshop, Pacific Grove, CA (talk)
- [22] Glover, K.C., MacDonald, G.M., Chaney, A. A 120,000-year vegetation and wildfire history from the San Bernardino Mountains, Southern California. International Biogeography Society Biennial Conference, Tucson, AZ (talk)
- 2016 [21] Glover, K.C., MacDonald, G.M., Kirby, M.E. Insights into hydroclimatic variability of Southern California since 125 ka, from multi-proxy analyses of alpine lake records. American Geophysical Union Fall Meeting, San Francisco, CA (**Invited talk**)
- [20] Glover, K.C. Vegetation Change in the San Bernardino Mountains from 60,000 – 15,000 years BP. California Geographical Society Annual Meeting, San Jose, CA (talk)
- Geosystems Paper Award**
- [19] Glover, K.C., MacDonald, G.M., Chaney, A., Saraf, S. A 90,000-year fire history from the San Bernardino Mountains, Southern California. American Association of Geographers Annual Meeting, San Francisco, CA (talk)
- Biogeography Student Paper Award**

- 2015 [18] Glover, K.C., MacDonald, G.M., Kirby, M.E., Rhodes, E., Stevens, L., Silveira, E., Whitaker, A., Lydon, S.E. Southern California climate, hydrology and vegetation over the past c. 96 ka from Baldwin Lake, San Bernardino Mountains, California. American Geophysical Union Fall Meeting, San Francisco, CA (poster)
- [17] Glover, K.C., MacDonald, G.M., Kirby, M.E., Rhodes, E., Stevens, L., Silveira, E., Whitaker, A., Lydon, S.E. Insight into Southern California's paleoclimate since Marine Isotope Stage 5c (c. 96 ka) from Baldwin Lake, San Bernardino Mountains, CA. Geological Society of America Annual Meeting, Baltimore, MD (talk)
- [16] Glover, K.C., MacDonald, G. M., Kirby, M.E., Rhodes, E. Paleohydrology, Native Vegetation, and Fire Regime during Marine Isotope Stages 2-3 in the San Bernardino Mountains, California, U.S. Quadrennial International Limnogeology Congress, Reno, NV (poster)
- [15] Glover, K.C., MacDonald, G.M., Kirby, M.E., Rhodes, E. Insight into Southern California paleohydrology since Marine Isotope Stage 5c (c. 96 ka) from Baldwin Lake, San Bernardino Mountains, CA. Pacific Climate Workshop, Pacific Grove, CA (talk)
- 2014 [14] Glover, K.C., MacDonald, G.M., Kirby, M.E. Lake Sequences from Big Bear Valley, San Bernardino Mountains, CA Provide Insight into Western Paleoclimate over the Past 100 kyr. California Geographical Society, Annual Meeting, Los Angeles, CA (talk)
- Tom McKnight 1<sup>st</sup> Place Graduate Student Paper Award**
- 2013 [13] Glover, K.C., MacDonald, G.M., Kirby, M.E., Rhodes, E. An emerging c. 100 ka record of climate change from Baldwin Lake, San Bernardino Mountains, CA, U.S. American Geophysical Union Fall Meeting, San Francisco, CA (poster)
- [12] Glover, K.C., MacDonald, G.M., Kirby, M.E., Paladino, L., Saraf, S., Tachiki, N. A 9.2 ka paleoecological history of Lower Big Bear Lake, San Bernardino Mountains, CA, and implications for Holocene climate change in the U.S. Coastal Southwest. Geological Society of America Annual Meeting, Denver, CO (talk)
- [11] Glover, K.C. Categorizing and visualizing 200,000 years of West Coast paleoclimate events. California Geographical Society Annual Meeting, San Luis Obispo, CA (digital map)
- [10] Glover, K.C., MacDonald, G.M., Kirby, M.E. Baldwin Lake, San Bernardino Co., CA, USA: a record of past glacial cycles. American Association of Geographers Annual Meeting, Los Angeles, CA (talk)
- [9] Glover, K.C., MacDonald, G.M., Kirby, M.E. West Coast environmental change over the last 150,000 years: a case study from Baldwin Lake, San Bernardino Mountains, California. Pacific Climate Workshop, Pacific Grove, CA (poster)
- 2012 [8] Glover, K.C. 150,000 years of climate change from West Coast pollen records." California Geographical Society Annual Meeting, Davis, CA (talk)
- 2011 [7] Glover, K. C., Lowell, T. V., Wiles, G., Pair, D., Applegate, P., Hadjas, I. Deglaciation, basin formation, and post-glacial climate change from a regional network of sediment core sites in Ohio and Eastern Indiana. American Geophysical Union Fall Meeting, San Francisco, CA (talk)
- 2006 [6] Glover, K.C., Lowell, T.V., Fisher, T., Hadjas, I., Waterson, N., Larson, P., Hamilton, R. Additional Radiocarbon Control for the Deglaciation and Subsequent Landscape Development of Northeastern Minnesota. 10<sup>th</sup> International Paleolimnology Symposium, Duluth, MN (talk)
- 2004 [5] Glover, K. C., Lowell, T. V., Wiles, G., Pair, D., Hadjas, I. Deglaciation and Post-Glacial Climate Change in a Regional Network of Sites, Ohio and Eastern Indiana.

- Geological Society of America Annual Meeting, Denver, CO (talk)
- 2003 [4] Glover, K. C., Lowell, T. V., Wiles, G., Pair, D. Tracking Climate Change in Ohio Throughout the Last Termination: A Network of Paleobasins Dating to c. 16,000 <sup>14</sup>C Years BP. XVI International Union for Quaternary Research, Reno, NV (poster)
- [3] Glover, K. C., Lowell, T. V. Paleoclimate Reconstruction of the Last Termination from a Bog Sequence, Champaign Co., Ohio. Third International Limnogeology Congress, Tucson, AZ (poster)
- 2002 [2] Glover, K. C., Lowell, T. V. Paleoclimate Reconstruction of the Last Termination, Champaign Co., Ohio. Geological Society of America Annual Meeting, Dever, CO (poster)
- 2001 [1] Glover, K. C. The Geologic Origin of Artifacts and Raw Materials in Stone from the Elmalı Basin, Turkey. Fifteenth National Conference on Undergraduate Research, Lexington, KY (poster)

## **Funding History**

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\$101,260 awarded in competitive fellowships, research grants, and travel funds.

\$136,092 currently in review

### **Research Grants**

<i>in review</i>	Principal Investigator: "Sensitivity of California Ecosystems to Climate Change and Wildfire: Building, Sharing and Analyzing Big Community Data Resources," USGS Powell Center for Data and Synthesis	\$136,092
2018	Principal Investigator: "Biogeography of Grand Kankakee Marsh, N. Indiana, U.S. over the past 5,000 years," National Geographic Committee for Research & Exploration. EC-55150R-18	\$9,920
2014	Limnological Research Center Graduate Student Travel Award	\$1,000
2014	UCLA La Kretz Center for California Conservation Science student award	\$1,100
2013	Geological Society of America Graduate Student Grant	\$2,100
2003	Geological Society of America Graduate Student Grant	\$2,460
2003	Sigma Xi Society Grant-in-Aid of Research	\$300

### **Fellowships**

2015-2016	Dissertation Year Fellowship, UCLA Graduate Division	\$20,500
2014-2015	Society of Woman Geographers National Fellow	\$12,000
2014	John Muir Memorial Chair Summer Fellowship	\$3,000
2012-2013	Graduate Research Mentor Fellowship, UCLA Graduate Division	\$20,500
2013 & 2012	Graduate Summer Research Mentorship, UCLA Graduate Division	\$13,000
2001-2002	Fenneman Fellowship, Dept of Geology, University of Cincinnati	\$13,000

### **Travel Awards**

2017	Columbia Univ Initiative on Extreme Weather and Climate	\$1,100
2015	American Association of Stratigraphic Palynologists	\$500
2014	Dissertation Pilot Program, UCLA Graduate Division	\$280
2003	U.S. National Committee for the International Union of Quaternary Research, The National Academies	\$500

## Teaching Experience

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### ***Instructor of Record***

- 2020 **Women and Climate Change** and **Professionalization in Biology**, University of Maine
- 2019 – 2020 **Biometry**, Unity College
- 2019 **Population and Community Ecology**, Unity College
- 2019 **Fueling the Future** graduate seminar, University of Maine
- 2014 & 2015 **Environmental Impact of Energy Resources** seminar, UCLA
- 2014 **Biogeography**, UCLA
- 2005-2011 **Earth Science 9** and **Environmental Science**, Charlotte Catholic High School
- 2005 **Introduction to Geology Lab**, University of North Carolina – Charlotte
- 2003 **Introduction to Geology Lab**, University of Cincinnati

### ***Teaching Assistant***

- 2015 **Biodiversity in a Changing World**, UCLA
- 2013-2015 **The Global Environment**, UCLA
- 2002-2003 **Introduction to Geology**, University of Cincinnati

### ***Student Mentorship***

- 2012-2019 11 undergraduate students for semester research credit and capstone projects

### ***Teacher Training***

- 2015 ENG COMP 495 Supervised Teaching Practicum, UCLA
- 2012 GEOG 495 Teaching College Geography, UCLA
- 2009 “Coal-to-Electricity: Teaching Environmental Issues,” Eastern Coal Council
- 2008 “Earth and Environmental Science for Teachers,” Pisgah Forest Institute
- 2007 Diocese of Charlotte Teaching License
- 2006 “Using Authentic Scientific Ocean Drilling Data for Earth Systems Science Inquiry,” K-12 Short Course at Geological Society Annual Meeting
- 2005-2007 15 Continuing Education Credits at Central Piedmont Community College, including “Differentiating Instruction,” “Introduction to ADHD,” and “Socratic Seminar”

## Field Experience

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- 2019 Sediment and soil coring, Grand Kankakee Marsh, Northern Indiana (PI)
- 2017 Lake coring in Acadia National Park
- 2017 Visitor Interpretation at several natural resource sites in Sequoia National Park
- 2015 Project 23 Excavation, La Brea Tar Pits, L.A. County Museums
- 2014, 2015 Vegetation survey in San Bernardino Mountains for Ph.D. research
- 2012 Site survey and coordinated lake drilling for Ph.D. research, San Bernardino Mountains
- 2012 Field mapping course of Quaternary sediments, Death Valley, CA
- 2007-2010 Mapped trail alignments, structures and terrain for California State Parks
- 2002-2004 Lake and bog coring trips in Canada, Midwest and Great Lakes region
- 2001 & 2002 Field mapping courses in glacial geology, Alaska and Canadian Rockies
- 2000 & 2001 Archaeological landscape survey in Turkey (2000) and Greece (2001)

## Outreach

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- 2019–present Blogging and webinars for Kankakee Paleo Project  
2017–present Blogging and social media outreach (Facebook, Twitter) for the La Brea Food  
Webs project (<http://labreawebs.wordpress.com> @labreawebs #labreawebs)  
2018 Virtual mentor via Skype, Girls Academic Leadership Academy, LAUSD  
2018 presenter, “Skype a Scientist” for middle school classrooms  
2018 presenter, “Summit-to-Sea Clues for Southern California’s Ice Age Climate and  
Vegetation” webinar, Society of Woman Geographers

## Professional Service

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- 2020 – 2022 Board member, Society of Woman Geographers  
2019 Reviewer, IPCC: The Physical Science Basis draft report  
2017- present Data Steward, North American Pollen Database and Neotoma Paleocology  
Database  
2014- present **Peer Reviewer**, American Chemical Society Petroleum Research Fund, National  
Science Foundation Geomorphology and Land-Use Dynamics Program,  
*Quaternary Research*, *International Journal of Limnology*, *Open Quaternary*,  
*Quaternary Science Reviews*, *PLoS One*, *Progress in Physical Geography*  
2015-2016 Fossil Lab Volunteer, Page Museum at La Brea Tar Pits, Los Angeles County  
Museums  
2013-2015 Organizing Committee, International Limnogeology Congress (ILIC6; June 2015)  
2013-2014 Geography Graduate Curriculum Reform Committee, UCLA  
2012-2013 Graduate-Faculty Representative, UCLA  
2012-2013 Graduate Student Association Representative, Faculty Welfare Committee,  
UCLA Academic Senate  
2006-2010 Faculty Sponsor, Outdoor Club, Cult Movie Club, Charlotte Catholic High School

## Professional Memberships

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- 2011 – present American Geophysical Union  
2012 – present Society of Woman Geographers  
2015 – present Earth Science Womens Network  
2017 – present Past Global Changes Working Group and Early Career Network  
2001 – 2018 Geological Society of America  
2016 – 2017 International Biogeography Society  
2011 – 2016 California Geographical Society  
2012 – 2016 American Association of Geographers  
2014 – 2016 American Association of Stratigraphic Palynologists