

Curriculum Vitae**Matthew E. Kirby, Ph.D.**

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History of Employment.

2002-present California State University, Fullerton, CA **Assistant/Associate/Full Professor**

2002 University of Southern California, Los Angeles, CA **Lecturer**

2001 Glendale Community College, Glendale, CA **Adjunct Professor**

1997-2001 Syracuse University, Syracuse, NY **Teaching Associate**

1999 University College at Syracuse University, Syracuse, NY **Teaching Associate**

1997 Syracuse University, Syracuse, NY **Teaching Assistant**

1995-1997 Canisius High School, Buffalo, NY **Instructor**

1991-1993 University of Colorado/INSTAAR, Boulder, CO **Research Assistant/Teaching Assistant**

Degrees.

Ph.D. Syracuse University, Syracuse, NY 2001 *Geology (Advisor: Dr. Henry T. Mullins)*

M.S. University of Colorado/Institute of Arctic and Alpine Research, Boulder, CO 1996 *Geology (Advisor: Dr. John T. Andrews)*

A.B. Hamilton College, Clinton, NY 1993 *Geology (Advisor: Dr. Eugene Domack)*

Narrative of Research Experience.

I use lake and wetland sediments to study past climate in the western United States (predominantly California). I combine various physical, chemical, and biological analyses to *define, describe, and explain* (i.e., in terms of climatic forcings) past climate change, with a specific focus on droughts, pluvials, floods, fire, and vegetation. My time scales range from the Holocene to the Last Interglacial. To date, I have published 52 peer reviewed papers, which for a professor at a non-R1 university, is above average. My funding sources include the National Science Foundation (n = 9), the American Chemical Society, National Geographic Society, the Southern California Earthquake Center, the Western National Parks Association, various regional water agencies, and internal state and university programs. I have reviewed 138 peer reviewed publications and 73 grants, including NSF panel participation. Finally, I have advised 65 research theses (MSc n = 18; BS/BA = 46; Female n = 38 Hispanic n = 18).

Short List of Key Publications.

2021, Jenifer A. Leidelmeijer[#], **Matthew E. C. Kirby**^{*}, Glen MacDonald, Joseph A. Carlin, Judith Avila[#], Jiwoo Han[#], Benjamin Nauman[#], Sean Loyd, Kevin Nichols, Reza Ramezan. Younger Dryas to early Holocene (12.9 and 8.1 ka cal yr BP) limnological and hydrological change at Barley Lake, CA (northern California Coast Range). *Quaternary Research*. pp. 1-15. DOI: <https://doi.org/10.1017/qua.2021.9> ^{*}corresponding author, [#]student author

2019 **Kirby**, M.E.C., Patterson, W.P., Lachniet, M., Noblet, J.A., Anderson, M.A., Nichols, K., Avila^{*}, J. Pacific Southwest United States Holocene summer Paleoclimate inferred from Sediment $\delta^{18}\text{O}_{(\text{calcite})}$ values (Lake

Elsinore, CA). Frontiers in Earth Science vol. 7, article 74, 14pp. <https://doi.org/10.3389/feart.2019.00074>. Open Access (*student)

2018 **Kirby, M.E.**, Heusser, L., Scholz, C., Ramezan, R., Anderson, M.A., *Markle, B., Rhodes, E. Glover, K.C., *Fantozzi, J., *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 33, 238-254. (*student)

2015 **Kirby, M.E.**, Knell, E.J., Anderson, W.T., Lachniet, M.S., *Silveira, E., *Palermo, J., *Hiner, C.A., *Eeg, H., *Arealo, A., *Lucero, R., *Murrieta, R., Evidence for Insolation and Pacific Forcing of Late Glacial through Holocene Climate in the Central Mojave Desert (Silver Lake, CA), Quaternary Research, 84, 174-186. (*student) doi:10.1016/j.yqres.2015.07.003

2014 **Kirby, M.E.**, Feakins, S.J., Hiner*, C.A., Fantozzi*, J., Zimmerman, S.R.H., Dingemans, T., Mensing, S.A., 2014. Tropical Pacific forcing of Late-Holocene hydrologic variability in the coastal southwest United States. Quaternary Science Reviews 102, 27-38. (*student)

2013 **Kirby, M.E.**, Feakins, S.J., Bonuso, N., Fantozzi*, J.M., Hiner*, C.A., Latest Pleistocene to Holocene hydroclimates from Lake Elsinore, California. Quaternary Science Reviews, 76, p. 1-15. *Invited review paper.* (*student)

2012 **Kirby, M.E.**, Zimmerman, S.R.H., Patterson, W.P., Rivera*, J.J., 2012. A 9170-year record of decadal-to-multi-centennial scale pluvial episodes from the coastal Southwest United States: a role for atmospheric rivers? Quaternary Science Reviews, 46, p. 57-65. (*student)

2010 **Kirby, M.E.**, Lund, S.P., Patterson, W.P., Anderson, M.A., Bird, B.W., Ivanovici*, L., Monarrez*, P., Nielsen*, S., A Holocene record of Pacific Decadal Oscillation (PDO)-related hydrologic variability in Southern California (Lake Elsinore, CA), Journal of Paleolimnology, 44, p. 819-839, DOI: 10.1007/s10933-010-9454-0. (*student)

2006 **Kirby, M.E.**, Lund, S.L., and Bird, B.W., Mid-Wisconsin Sediment Record From Baldwin Lake Reveals Hemispheric Climate Dynamics (Southern CA, USA), Palaeogeography, Palaeoclimatology, Palaeoecology, 241, p. 267-283, doi: 10.1016/j.palaeo.2006.03.043.

2003 Burnett, A.W., **Kirby, M.E.**, Mullins, H.T., Patterson, W.P., Increasing Great Lake effect snowfall during the 20th century as a regional response to global warming, Journal of Climate, 16, p. 3535-3542.

2002 **Kirby, M.E.**, Mullins, H.T., Patterson, W.P., Burnett, A.W., Late glacial-Holocene atmospheric circulation and precipitation in the northeast United States inferred from modern calibrated stable oxygen and carbon isotopes, Geological Society of America Bulletin, 114, p. 1326-1340.

1999 **Kirby, M.E.**, Andrews, J.T., Mid-Wisconsin Laurentide Ice Sheet Growth and Decay: Implications for Heinrich Events 3 and 4, Paleoceanography, 14, p. 211-223.

Honors.

2009 California State University, Fullerton, CA: Faculty Award for Outstanding Research; School of Natural Sciences and Mathematics

2005 California State University, Fullerton, CA: Award for Outstanding Untenured Faculty; School of Natural Sciences and Mathematics

Professional Memberships.

Geological Society of America; American Geophysical Union; Sigma Xi; American Indian Science and Engineering Society, Southern California Academy of Sciences, Southern California Earthquake Center