

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

California State University, Fullerton
 Department of Geological Sciences
 CSU Desert Studies Center Faculty Affiliate
 Office: MH-276

Lab: DBH- 175

Fullerton, CA 92834-6850
 Office Phone (657) 278-2158
 Lab Phone (657) 278-3303
 E-mail mkirby@fullerton.edu

Education.

Professor	California State University, Fullerton, CA	2015-
Associate Professor	California State University, Fullerton, CA	2008-2015
Assistant Professor	California State University, Fullerton, CA	2002-2008
Post-Doc Research Assoc.	University of Southern California Los Angeles, CA	2001-02
Projects:	Lacustrine sedimentology; Holocene tropical climate variability and forcings; climate modeling.	
Ph.D.	Syracuse University, Syracuse, NY	2001
Advisor:	Dr. Henry T. Mullins	
Dissertation:	<u>14,600 Calendar Years of Decadal-to-Centennial Scale Atmospheric Circulation and Precipitation Change, Fayetteville Green Lake, NY.</u>	
M.Sc.	University of Colorado/Institute of Arctic and Alpine Research, Boulder, CO	1996
Advisor:	Dr. John T. Andrews	
Thesis:	<u>Mid to late Wisconsin Ice Sheet/Ocean Interactions in the Northwest Labrador Sea: Sedimentology, Provenance, Process, and Chronology.</u>	
A.B.	Hamilton College, Clinton, NY	1993
Advisor:	Dr. Eugene W. Domack	
Thesis:	<u>High Resolution Seismic Stratigraphy and Sedimentological Analysis of Holocene Glacial Marine Sediments in the Palmer Deep Basin, Bellingshausen Sea, Antarctica.</u>	
	Elected as Associate Member to Sigma Xi, The Scientific Research Society (1993)	

Teaching Experience.

2002-	California State University, Fullerton, CA
	Assistant/Associate/Full Professor: Physical Geology (GEOL 101); Honors Program: Critical Thinking (101H); Earth's Atmosphere (GEOL 140); Earth's Atmosphere and Oceans (GEOL 140); Earth's Environmental Crises (GEOL 310T); General Oceanography (GEOL 333); Surface Processes and Hydrology (GEOL 335); Writing in the Geosciences (GEOL 410); Paleoclimatology (GEOL 440); Environmental Geology and Planning (GEOL 470); Advanced Topics in Geology (GEOL 500); Paleolimnology (GEOL 510T); Geoscience Seminar (GEOL 590).

- 2002 University of Southern California, Los Angeles, CA
Lecturer: Graduate Seminar in Environmental Studies Program (503/504); Earth Systems Sciences (Summer Studies Program for High School Students)
- 2001 Glendale Community College, Glendale, CA
Adjunct Professor: Physical Geology (101); Physical Geology Laboratory (111)
- 1997-2001 Syracuse University, Syracuse, NY
Teaching Associate: Physical Geology (GOL 101); Historical Geology (GOL 102); Earth Systems Science (GOL 103); Earth Science (GOL 105); Environmental Geology (GOL 242)
- 1999 University College at Syracuse University, Syracuse, NY
Teaching Associate: Green Lake and Regional Climate Change
- 1997 Syracuse University, Syracuse, NY
Teaching Assistant: Earth Science (GOL 105)
- 1995-1997 Canisius High School, Buffalo, NY
Instructor: Earth Science; Biology
- 1991-1993 University of Colorado/INSTAAR, Boulder, CO
Research Assistant/Teaching Assistant: Natural Catastrophes; Global Change
- 1991-1993 Hamilton College, Clinton, NY
Teaching Assistant: Oceanography; Physical Geology

Publications (peer-reviewed only [accepted, in press, in revisions, or in review]).

- 56) 2023**, O’Keefe et al. Climate change primed southern California for anthropogenic ecosystem collapse 13,200 years ago. *Science*
- 55) 2023**, Edward Knell, Jan Taylor, **Matthew E Kirby**, Albert Garcia. Land Use at Pluvial Lake Mojave: A Temporally and Seasonally Dynamic Wetlands Resource Patch in Central California’s Mojave Desert. *Journal of Archaeological Science: Reports*.
- 54) 2023**, Jiwoo Han, **Matthew Kirby**, Glen MacDonald. Joe Carlin, A diatom-inferred water depth transfer function from a single lake in the northern California Coast Range. *Journal of Paleolimnology*. <https://doi.org/10.1007/s10933-023-00281-0>
- 53) 2023**, **Matthew Kirby**, Jazleen Barbosa, Joe Carlin, Glen MacDonald, Jenifer Leidelmeijer, Nicole Bonuso, Jiwoo Han, Benjamin Nauman, Judith Avila, Alex Woodward, Sophia Obarr, Cody Poulsen, Kevin Nichols, Reza Ramezan. Milankovitch, volcanic, and ocean atmosphere forcing of Holocene relative lake-level change at Maddox Lake, CA (northern CA Coast Range). pp. 1-19. *Quaternary Research*. <https://doi.org/10.1017/qua.2023.18>
- 52) 2022**, Dickson, S., Carlin, J., Bonuso, N., and **Kirby, M.** Documenting the Evolution of a Southern California Coastal Lagoon during the Late Holocene. *Coasts*. 2, pp. 102-124. <https://doi.org/10.3390/coasts2020007>
- 51) 2021**, Scott W. Starratt, **Matthew E. Kirby**, and Katherine Glover. Diatom Record of Holocene Moisture Variability in the San Bernardino Mountains, California, USA. *M. R. Rosen et al. (eds.), Limnogeology: Progress, Challenges and Opportunities in Syntheses in*

Limnogeology. Springer Nature Switzerland AG 2021. DOI:

https://doi.org/10.1007/978303066576-0_11

50) 2021, Marden, Michael; Holt, Katherine; Ryan, Matthew; Carrasco, Joe; Marsaglia, Kathleen; **Kirby, Matthew**; Palmer, Alan. Stratigraphy and vegetation signals from an upland, landslide-dammed, paleolake during the Last Glacial-Interglacial Transition, Waipaoa Sedimentary System, Hikurangi Margin, eastern North Island, New Zealand New Zealand Journal of Geology and Geophysics. pp. 1-22. DOI:

<https://doi.org/10.1080/00288306.2021.1947327>

49) 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

48) 2021, Routson, C.C., Kaufman, D.S., McKay, N.P., Erb, M.P., Arcusa, S.H., Brown, K.J., **Kirby, M.E.**, Marsicek, J.P., Anderson, R.S., Jiménez-Moreno, G., Rodysill, J.R., Lachniet, M.S., Fritz, S.C., Bennett, J.R., Goman, M.F., Metcalfe, S.E., Galloway, J.M., Schoups, G., Wahl, D.B., Morris, J.L., Staines-Urías, F., Dawson, A., Shuman, B.N., Gavin, D.G., Munroe, J.S., Cumming, B.F., 2021. A multiproxy database of western North American Holocene paleoclimate records. Earth System Science Data. 13, 1613-1632.

<https://doi.org/10.5194/essd13-1613-2021>

47) 2021, Lund, S., Mortazavi, E., Platzman, E., **Kirby, M.E.**, Stoner, J., Okada, M. Rock Magnetic Variability of Quaternary Deep-Sea Sediments from the Bering Sea and their Environmental Implications. Deep Sea Research Part I.

<https://doi.org/10.1016/j.dsr.2021.103487>

46) 2021 **Kirby, M.E.**, 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 (Lake Elsinore, California), in: Starratt, S.W., Rosen, M.R. (Eds.), From Saline to Freshwater: The Diversity of Western Lakes in Space and Time. Geological Society of America Special Paper 536. (*student).

45) 2020, Glover, K.C., Chaney, A., **Kirby, M.E.**, Patterson, W.P. and 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, 35(2), p.e2019PA003628.

44) 2019, Katherine Baumberger; M.V. Eitzel; **Matthew E. Kirby**; Michael H. Horn. Movement and habitat selection of the western spadefoot (*Spea hammondi*) in southern California. PLoS ONE 14(10): e0222532. <https://doi.org/10.1371/journal.pone.0222532>

43) 2019, **Matthew E. Kirby**, Stefanie A. Mayer, William T. Anderson, Brenna Hess, Corey Stout, Jennifer Palermo, Jenifer Leidelmeijer, Hogan Rangel, Gregory Weisberg, and Amanda Shellhorn, Mojave Climate Hidden in Lake Mud, Mojave National Preserve Science Newsletter. (peer reviewed [n=3]) <https://www.nps.gov/moja/learn/science-newsletter.htm>

42) 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).

41) 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 south west United States (Lake Elsinore, CA). Journal of Quaternary Science 33, 238-254. (*student)
- 40)** 2018 Bryan Shuman, Cody Rouston, Nicholas McKay, Sherilyn Fritz, Darrell Kaufman, **Matthew Kirby**, Connor Nolan, Greg Pederson, and Jeannine St. Jacques, Placing the Common Era in a Holocene context: millennial to centennial patterns and trends in the hydroclimate of North America over the past 2000 years, Climate of the Past, 14, 665-686. <https://doi.org/10.5194/cp-14-665-2018>
- 39)** 2017 Holden, A.*, Southon, J., Kipling, W., **Kirby, M.**, Aalbu, R., and Markey, M., A 50,000-year insect record from Rancho La Brea, Southern California: Insights into past climate and fossil deposition, Quaternary Science Reviews 168, 123-136. <https://doi.org/10.1016/j.quascirev.2017.05.001> (*student)
- 38)** 2017 K. Glover*; G. MacDonald; **M. Kirby**; E. Rhodes; L. Stevens; E. Silveira; S. Lydon; A. Whitaker. Insolation and North Atlantic Climate Forcing in alpine Southern California since 125 ka, Quaternary Science Reviews 167, 47-62. (*student)
- 37)** 2017 Leeper*, R., Rhodes, B., **Kirby, M.E.**, Scharer, K.M., Carlin, J.A., Hemphill-Haley, E., Avnaim-Katav, S., MacDonald, G.M., Starratt, S.W., Aranda*, A.N., Evidence for coseismic subsidence events in a southern California coastal saltmarsh, Scientific Reports 7, 44615, doi:10.1038/srep44615 (*student)
- 36)** 2016 Hiner, C.A.* , **Kirby, M.E.**#, Bonuso, N., Patterson, W.P., Palermo, J., Silveira, E., Late Holocene hydroclimatic variability linked to Pacific forcing: evidence from Abbott Lake, coastal central California. Journal of Paleolimnology: 56 (4), 299-313 (*student; #corresponding and lead author M.E. Kirby)
- 35)** 2016 **Kirby, M.E.**, Climate science: Water's past revisited to predict its future. Nature 532:44-45.
- 34)** 2015 Heusser, L., **Kirby, M.E.**, Nichols, J.E., Pollen-based evidence of extreme drought during the last Glacial (32.6 - 9.0 ka) in coastal southern California, Quaternary Science Reviews, 126, 242-253. doi:10.1016/j.quascirev.2015.08.029
- 33)** 2015 **Kirby, M.E.**, Knell, E.J., Anderson, W.T., Lachniet, M.S., *Silveira, E., *Palermo, J., *Hiner, C.A., *Eeg, H., *Arevalo, 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
- 32)** 2015 Ibarra*, Y., Corsetti, F.A., Feakins, S.J., Rhodes, E.J., **Kirby, M.E.**, Fluvial tufa evidence of Late Pleistocene wet intervals from Santa Barbara, California, U.S.A. Palaeogeography, Palaeoclimatology, Palaeoecology, 422, 36–45. (*student)
- 31)** 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)
- 30)** 2014 Dingemans*, T., Mensing, S.A., Feakins, S.J., **Kirby, M.E.**, Zimmerman, S.H., 2014. 3000 years of environmental change at Zaca Lake, California, USA. Frontiers in Ecology and Evolution 2. (*student)
- 29)** 2014 Feakins, S.J., **Kirby, M.E.**, Cheetham, M.I., Ibarra*, Y., and Zimmerman, S.R., Fluctuations in leaf wax D/H ratios from a southern California lake record significant variability in

isotopes in precipitation during the late Holocene. Organic Geochemistry, 66, p. 48-59. (*student)

28) 2014 Knell, E.J., Walden-Hurtgen*, L.C., **Kirby, M.E.**, Paleoarchaic Spatio-Temporal Pattering Around Pluvial Lake Mojave, Eastern Mojave Desert, California. Journal of California and Great Basin Anthropology, 34 (1). (*student)

27) 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)

26) 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)

25) 2012 Andrews, J.T., Barber, D.C., Jennings, A.E., Eberl, D.D., Maclean, B., **Kirby, M.E.**, Stoner, J.S., 2012. Varying sediment sources (Hudson Strait, Cumberland Sound, Baffin Bay) to the NW Labrador Sea slope between and during Heinrich events 0 to 4. Journal of Quaternary Science, 27, p. 475-484.

24) 2011 Rhodes, B.P.* , **Kirby, M.E.**, Jankaew, K., Choowong, M., 2011. Evidence for a mid Holocene tsunami deposit along the Andaman coast of Thailand preserved in a mangrove environment. Marine Geology, 282, p. 255-267. *(*Rhodes and Kirby: shared lead authorship*)

23) 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)

22) 2010 Rothenberg, S.E., **Kirby, M.E.**, Bird, B.W., DeRose*, M.B., Lin, C-C., Feng, X.B., Ambrose, R.F., Jay, J.A., The Impact of More Than 100 Years of Wildfires on Mercury Levels and Accumulation Rates in Two Lakes in Southern California, USA. Environmental Earth Sciences, 60, p. 993-1005, DOI: 10.1007/s12665-009-0238-7. (*student)

21) 2010 Bird, B.W.* , **Kirby, M.E.** #, Howat, I., Tulaczyk, S., Geophysical Evidence for Holocene Lake-Level Change in Southern California (Dry Lake), Boreas, 39, p. 131-144, DOI: 10.1111/j.1502-3885.2009.00114.x. ISSN 0300-9483. (*student; #corresponding and lead author M.E. Kirby)

20) 2009 Michael A Blazevic*; **Matthew E Kirby**; Adam D Woods; Brandon L Browne; David D Bowman. A sedimentary facies model for glacial-age sediments in Baldwin Lake, Southern California, Sedimentary Geology, 219, p. 151-168. (*student)

19) 2007 **Kirby, M.E.**, Lund, S.P., Anderson, M.A., Bird, B.W., Insolation Forcing of Holocene Climate Change in Southern California: A Sediment Study from Lake Elsinore, Journal of Paleolimnology, 38, p. 395-417 doi: 10.1007/s10933-006-9085-7.

18) 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.

17) 2006 Bird, B.W.* and **Kirby, M.E.**, An alpine lacustrine record of early Holocene North American Monsoon dynamics from Dry Lake, southern California (USA), Journal of Paleolimnology, 35, p. 179-192. (*student)

16) 2005 **Kirby, M.E.**, Lund, S.P., Poulsen, C.J., Hydrologic variability and the onset of modern

El Niño-Southern Oscillation: a 19,250-year record from Lake Elsinore, Southern California, Journal of Quaternary Science, 20, p. 239-254.

15) 2004 **Kirby, M.E.**, Poulsen, C.J., Lund, S.P., Patterson, W.P., Reidy, L., and Hammond, D.E., Late Holocene lake level dynamics inferred from magnetic susceptibility and stable oxygen isotope data: Lake Elsinore, Southern California (USA), Journal of Paleolimnology, 31, p. 275-293.

14) 2003 Mullins, H.T., Burnett, A.W., Hilfinger, M.F., **Kirby, M.E.**, Millennial-Scale Lake-Level Fluctuations at Green Lakes State Park, New York: Implications for Atmospheric Circulation and Paleoprecipitation over the Northeastern United States, Northeast Geology and Environmental Science, 25, p. 197-205.

13) 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.

12) 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.

11) 2002 **Kirby, M.E.**, Patterson, W.P., Mullins, H.T., Burnett, A.W., Post-Younger Dryas climate interval linked to circumpolar vortex variability: isotopic evidence from Fayetteville Green Lake, New York, Climate Dynamics, 19, p. 321-330, DOI 10.1007/s00382-002-0227-y.

10) 2001 **Kirby, M.E.**, Mullins, H.T., Patterson, W.P., Burnett, A.W., Lacustrine isotopic evidence for multi-decadal natural climate variability related to the circumpolar vortex over the NE USA during the past millennium, Fayetteville Green Lake, New York, Geology, 9, p. 807-810.

9) 2001 Hilfinger, M.F., Mullins, H.T., Burnett, A.W., **Kirby, M.E.**, A 2500 Year Sediment Record from Fayetteville Green Lake, New York: Evidence for Anthropogenic Impacts and Historic Climate Shift, Journal of Paleolimnology, 26, p. 293-305.

8) 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.

7) 1998 **Kirby, M.E.**, Domack, E.W., McClennen, C.E., Magnetic Stratigraphy and Sedimentology of Holocene Glacial Marine Deposits in the Palmer Deep, Bellingshausen Sea, Antarctica: Implications for Climate Change, Marine Geology, 152, p. 247-259.

6) 1998 Rebesco, M., Camerlenghi, A., De Santis, L., Domack, E., **Kirby, M.E.**, Seismic Stratigraphy of Palmer Deep: A Fault-Bounded Late Quaternary Sediment Trap on the Inner Continental Shelf, Antarctic Peninsula Pacific Margin, Marine Geology, 151, p. 89-110.

5) 1998 **Kirby, M.E.**, Heinrich Event-0 (DC-0) in Sediment Cores from the Northwest Labrador Sea: Recording Events in Cumberland Sound?, Canadian Journal of Earth Sciences, 35, p. 510-519.

4) 1998 Andrews, J.T., **Kirby, M.E.**, Jennings, A.E., Barber, D.C., Late Quaternary Stratigraphy, Chronology, and Depositional Processes on the Slope of S.E. Baffin Island, Detrital Carbonate and Heinrich Events: Implications for Onshore Glacial History, Geographie physique et Quaternaire, 52, p. 91-105.

3) 1998 Andrews, J.T., **Kirby, M.E.**, Aksu, A., Barber, D.C., Meese, D., Late Quaternary Detrital

Carbonate (DC-) Layers in Baffin Bay Marine Sediments (67°-74°N): Correlations with Heinrich Events in the North Atlantic?, Quaternary Science Reviews, 17, p. 1125-1137.

2) 1996 Jennings, A.E., Tedesco, K.A., Andrews, J.T., **Kirby, M.E.**, Shelf Erosion and Glacial Ice Proximity in the Labrador Sea During and After Heinrich Events (H-3 or 4 to H-0) as Shown by Foraminifera, Geological Society Special Publication No. 111, p. 29-49.

1) 1995 Andrews, J.T., Jennings, A.E., Kerwin, M., **Kirby, M.E.**, Manley, W., Miller, G.H., Bond, G., MacLean, B., A Heinrich-like Event, H-0 (DC-0): Source(s) for Detrital Carbonate in the North Atlantic During the Younger Dryas Chronozone, Paleoceanography, 10, p. 943-952.

Final Reports (Contracts).

- (6) 2018 **Kirby, M.E.**, 15,000 years of climate change as told by the sediments of Ford Lake, submitted to the Western National Parks Association (grant #15-03) 13pp.
- (5) 2009 YOUSSEF C. ATALLAH, JOHN A. WHEELER, **MATTHEW E. KIRBY**, C. EUGENE JONES, DARREN R. SANDQUIST, AND AMYBETH COHEN, *TASK 9. Soils analysis comparison of soil particle size analysis within the Santa Ana Woolly Star habitat between 1989 and 2008. In "Atallah Y. C., C. Eugene Jones, Darren R. Sandquist, and Amybeth Cohen. 2009. Implementation of the Santa Ana River Woolly Star Management Plan (2005-2009). For the San Bernardino County Flood Control District through subcontract with Psomas, Costa Mesa, California"*
- (4) 2006 Bryne, R. and Reidy, L. with assistance from Sengupta, D., Watson, B., Schmidt, D., Arthur, A., **Kirby, M.**, Krause, J., Sullivan, J., Borkowski, J., Yiu, A., and Menchaca, A., Recent (1850-2005) and Late Holocene (AD 400 – AD 1850) Sedimentation Rates at Bolinas Lagoon, Marin County, California, Contract Report submitted to the Marin County Open Space District, 37pp. plus figures.
- (3) 2005 **Kirby, M.E.**, Determination of Sedimentation Rate and Sedimentation Processes at Big Bear Lake: Using a Paleo-Perspective to Understand Modern Sedimentary Systems, Contract Report submitted to Big Bear Municipal Water District, 41pp.
- (2) 2005 **Kirby, M.E.**, Anderson, M., Lund, S.P., and Poulsen, C.J., Developing a baseline of natural lake-level/hydrologic variability and understanding past versus present lake productivity over the late-Holocene: a paleo-perspective for management of modern Lake Elsinore, Contract Report submitted to Lake Elsinore-San Jacinto Water Authority, 79pp.
- (1) 2003 Byrne, R., Reidy, L., **Kirby, M.**, Lund, S., and Poulsen, C., Changing Sedimentation rates during the Last Three Centuries at Lake Elsinore, Riverside County, California, Final Report to the Santa Ana Regional Water Quality Control Board, 41pp.

Non-Peer Reviewed Papers/Commentaries/Articles.

- (3) 2017 **Kirby, M.E.**, CSUF expert explains relationship between the Pacific Ocean and California's drought history (invited commentary)
<http://www.ocregister.com/articles/california-740685-water-southern.html>

- (2) 2013 **Kirby, M.E.**, So Cal prehistoric weather shows drastic climate change: Orange County Register (invited commentary)
<http://www.ocregister.com/articles/climate-515935-california-kirby.html>
- (1) 2007 **Kirby, M.E.**, Students Look to the Past to See the Future, National Ground Water Association, Groundwater: News and Views (invited commentary), Volume 4, Number 1, June, p. 7-8.

Abstracts (up-to-date as of 03/15/22 n = 157).

Grants and Contracts (bold red = funded). Total awarded \$2,513,480; Total to CSUF \$1,590,180

California State University, Fullerton, CA

- 2023** Mitigating Floods for Underserved Communities: A Natural or Social Disaster (*in review* at **California Climate Action Seed Awards** [total: \$1,846,421]). PI: Matthew E. Kirby (\$359,182). Co-PI: Gilad Shtienberg (UCSD), Mor Shilon (UCSD), Alexander Simms (UCSB), Patrick Rafter (UCI), Richard Norris (UCSD), David Jacobs (UCLA), Adam Young (UCSD), Alexander Gershunov (UCSD).
- 2022** Collaborative Research: Using a Combined Basin Analysis, Isotopic, and Modeling Approach to Reconstruct the LGM through Early Holocene Hydroclimate for Glacial Lake Mojave (**funded** at **NSF-EAR P4CLIMATE**; \$565,669). PI: Matthew E. Kirby (\$225,073). Co-PI: Dan Ibarra (Brown University; \$272,434) and Angela Daneshmand (Santiago Canyon College; \$68,162).
- 2022** Developing a 1000-Year Wildfire and Climate History of Chino Hills State Park, CA (**funded** at **CSUF Summer Undergraduate Research Academy (SUREA)**; \$4,470)
- 2022 Learning from the Past - Informing for the Future: A history of Late Holocene floods along the Ping River, Thailand *not funded* at the **National Geographic Society**; \$64,142). PI: Dr. Matthew E. C. Kirby, co-PI: Dr. Joe Carlin.
- 2022** Upgrades and Acquisitions for the Collaborative Cal-State Fullerton Paleoclimate, Coastal Processes, and Archaeology Lithics Research Laboratories (**funded** at **NSF-IF**; \$247,680). PI: Dr. Matthew Kirby (CSUF Department of Geological Sciences); co-PIs: Dr. Edward Knell (CSUF Department of Anthropology) and Dr. Joe Carlin (CSUF Department of Geological Sciences)
- 2021** Collaborative Research: The California Precipitation Dipole: Spatiotemporal Variability and Forcings Over the Past 3000 Years: (**supplemental funding awarded** at **NSF-EAR P2C2**; \$17,527). PI: Matthew E. Kirby. (8/15/21)
- 2021 Learning from California's Past Water History to Prepare for the Future: A Sediment Study at Silver Lake, CA (*in review* at **CSU WRPI**, \$8,072). PI: Dr. Matthew Kirby, submitted June 19, 2021
- 2020 Learning from the Past - Informing for the Future: A history of Late Holocene floods along the Ping River, Thailand **written, submitted (8/1/20), and returned (8/28/20) due to COVID-19** at **National Geographic Society**;

\$29,582). PI: Dr. Matthew E. C. Kirby, co-PI: Dr. Joe Carlin (asked to resubmit in Fall 2021 or TBA depending on COVID-19)

- 2019 A Transdisciplinary Temporal, Spatial, and Site Function Based Approach to Establishing Prehistoric Settlement Patterns around Pluvial Lake Mojave, Mojave Desert, California (*not funded* at **NSF-BCS**; \$316,160). PI: Dr. Edward Knell (CSUF Department of Anthropology); co-PIs: Dr. Matthew Kirby and Dr. Joe Carlin (CSUF Department of Geological Sciences), submitted on 12/20/19
- 2019** Lake-Margin Wetland Habitat and Resource Patch Dynamics at Pluvial Lake Mojave and other Mojave Desert Pluvial Lakes (*funded* at **Anza Borrego Foundation, Robert S. Begole Archaeological Research Grant**; \$5,000). PIs: Ed Knell and Matthew E. Kirby
- 2019** Multidisciplinary investigation of determining channel incision ages in the Carrizo Plain, California (*funded* at **SCEC**; \$38,241). PIs: Sinan O. Akçiz and Matthew E. Kirby.
- 2018 Collaborative Research: Documenting drought frequency, severity, and extent from the Holocene to the Anthropocene in semi-arid peninsular India (*not funded* at **NSF International Research Experiences for Students (IRES) Track 1**; \$471,000). Lead PI: Andrew Michelson (SUNY, Maritime). Collaborative PIs: Bhattacharya (CU Boulder) and Leonard-Pingel (OSU-Newark); **Senior Collaborator**: Matthew E. Kirby (CSUF).
- 2018** Sailing in the Mojave Desert: (*funded* at **CSUF RSCA**; \$15,000). PI: Matthew E. Kirby.
- 2018** Late Glacial Human-Environment Interactions at Glacial Lake Mojave: (*funded* at **BLM**; ~\$9,000). PI: Matthew E. Kirby. Co-PI: Ed Knell
- 2018** Re-Examining Southern California Lake Sediment Cores with Environmental DNA to Revolutionize How We Study the Past: (*funded* at **NSF BCS-GSS**; \$207,023, no funds to CSUF). **PIs**: Rachel Meyer, Beth Shapiro, Don Hankins, Glen MacDonald, Bob Wayne (all UCLA); **Senior Collaborator**: Matthew Kirby
- 2017** Collaborative Research: The California Precipitation Dipole: Spatiotemporal Variability and Forcings Over the Past 3000 Years: (*funded* at **NSF-EAR P2C2**; \$345,802). PI: Matthew E. Kirby. Co-PIs: J. Carlin (CSUF), Reza Ramezan (CSUF), Kevin Nichols (CSUF), Glen MacDonald (UCLA - \$193,430). 06/01/17-05/31/20
- 2015 Tracking the Far Western United States Precipitation Dipole Over the Past 3000 Years: (*not funded* at **NSF-EAR P2C2**; \$239,79. PI: Matthew E. Kirby (CSUF). Submitted 10/15/15
- 2014** 15,000 Years of Climate Change in the Mojave National Preserve as Told by The Sediments From Ford Lake: (*funded* at **Western National Park Association**; \$7,500). PI: Matthew E. Kirby (CSUF)
- 2014 Cross-departmental Course Linking Climatic Change (Geology) and Human Adaptation (Archaeology): (*not funded* at **CSUF FDC**; 3 WTUs). PI: Edward Knell (CSUF); PI: Matthew Kirby (CSUF)

- 2014** Seal Beach Wetlands: A Potential Paleoseismic and/or Tsunami Record for Southern California": (**funded** at **SCEC**; \$18,000). PI: Brady Rhodes (CSUF); co-PI: Matthew Kirby (CSUF)
- 2013** How wet was Southern California 125,000 years ago?: (**funded** at **CSUF State Special Fund** Mini-Grant: \$4,994 plus \$2,000 undergraduate stipend). PI: Matthew E. Kirby (CSUF)
- 2013** Collaborative Research: Evaluating hydrologic and ecologic responses to late Glacial (9-33ka) abrupt climatic transitions in the coastal southwest United States: (**funded** at **NSF-EAR P2C2**; \$259,406 [\$95,557 to CSUF]). PI: Matthew E. Kirby (CSUF); co-PI: Linda Heusser (LDEO); co-PI: Sarah Feakins (USC)
- 2012** Do the Wetlands of California Preserve a Record of Paleotsunami?: (**funded** at **SCEC**; \$10,000). PI: Brady Rhodes (CSUF); co-PI: Matthew Kirby (CSUF)
- 2011** EAGER: Search for a Paleotsunami Record in the Wetlands of Southern California: (**funded** at **NSF-SED GEO & PALEO**; \$57,703). PI: Brady Rhodes (CSUF); co-PI: Matthew Kirby (CSUF)
- 2010 Evaluating the Application of Hydroacoustic Technology to Water and Sediment Research: (*not funded* at **UC/CSU Dean's Committee**; \$8,800). PI: Matthew E. Kirby (CSUF); co-PI: Michael Anderson (UC Riverside)
- 2010** 4,500 years of Hydrological Variability from Zaca Lake, close to the Santa Barbara Basin: (**funded** at **NSF P2C2**; \$252,952 [\$74,923 to CSUF]). PI: Sarah Feakins (USC); co-PI: Matthew Kirby (CSUF)
- 2009** Precursors to the 2004 Indian Ocean tsunami: Investigations of a paleotsunami stratigraphic record within Holocene sediments of Pra Thong Island, southern Thailand: (**funded** at **National Geographic Society**; \$20,000). PI: Brady Rhodes (CSUF); co-PI: Matthew Kirby (CSUF)
- 2008** Seed Money To Begin an Investigation of Past Climate Using Sediments From Barbara's Lake, Orange County, CA: (**funded** at **CSUF State Special Fund** Mini-Grant: \$4,994). PI: Matthew E. Kirby (CSUF)
- 2008 Collaborative Research: Development of a >100,000 Year Record of Hydrological and Vegetation Response to Past Periods of Climate Warming and Cooling From Southern California: (*not funded* at **NSF Sed-Paleo**; \$474,000 [\$154,000 to CSUF]). PI: Matthew E. Kirby; co-PIs: Nicole Bonuso (CSUF), Glen MacDonald (UCLA), Steve Lund (USC), Bill Anderson (FIU)
- 2008** A Combined Geophysical and Lithostratigraphic Investigation of a Young Pull-Apart Basin: Evaluating the Relationship Between Basin Sedimentation, Late-Quaternary Climate Change, and Tectonics (Lake Elsinore, Southern California): (**funded** at **ACS-PRF**; \$65,000). PI: Matthew E. Kirby (CSUF)
- 2007 Collaborative Research: Holocene Recurrence of Indian Ocean Tsunamis in Thailand: (*not funded* at **NSF-EAR**; \$367,588). PI: Brady Rhodes (CSUF); co-PI: Matthew Kirby (CSUF); co-PI: Benjamin Horton (UPenn); co-PI: Joanne Bourgeois (UWash)
- 2007** Using Modern Grain Size Distribution and C:N Ratios to Infer Past Lake Level Change at Lake Elsinore, CA: (**funded** at **CSUF Undergraduate Research and**

Creativity Award; \$500). PI: Matthew E. Kirby (CSUF) and Ms. Luissa Ivanovici (B.Sc. Geology major candidate)

- 2007** Acquisition of an Elemental Analyzer for Geological and Biological Research: (**funded** at **NSF-EAR**; \$37,499). PI: Matthew E. Kirby; co-PIs: Adam Woods, Darren Sandquist, Mike Horn
- 2006 Records of Multi-timescale Terrestrial Climate Change Across Southern California (Subproject 1): (*not funded* at **NSF-CREST**; ~\$266,000). PI: Matthew E. Kirby; co-PI: Darren Sandquist
- 2006** SEARCH FOR A INDIAN OCEAN PALEOTSUNAMI RECORD ALONG THE ANDAMAN COAST, THAILAND: (**funded** at **NSF-EAR SGER**; \$19,475). PI: Brady Rhodes; co-PI: Matthew Kirby
- 2006** COLLABORATIVE RESEARCH/RUI: Assessing Multi-scale Holocene Climate Variability in Western North America Using Sediments From Lake Elsinore (Southern CA): (**funded** at **NSF-ESH**; \$104,741 to CSUF (total \$152,637). PI: Matthew E. Kirby; co-PI: Steve Lund
- 2005 Analysis of Stable Oxygen Isotopes Values From Calcite as an Indicator of Past Hydrologic Variability for Lake Elsinore: (*program ended* at the **Lake Elsinore-San Jacinto Water Authority**; ~\$30,000). PI: Matthew E. Kirby
- 2005** Sources and Yields of Methyl Mercury in Mugu Lagoon: (**funded** at **UCLA to CSUF**; \$6,745). PI: Matthew E. Kirby (CSUF)
- 2005** Supplement for Underrepresented Minority Research Fellowship for DEVELOPING LATE-HOLOCENE RECORDS OF FLOOD-PRODUCING, PRECIPITATION VARIABILITY FROM SMALL LAKES IN SOUTHERN CALIFORNIA: (**funded** at The **American Chemical Society/Petroleum Research Fund**; \$5,000). PI: Matthew E. Kirby (CSUF).
- 2004 Collaborative Research/RUI: Spatial and Temporal Patterens of Multi-Decadal-to-Centennial Scale Holocene Climate Variability in Western North America: Lake Elsinore, Southern CA: (*not funded* at **NSF-ESH**; ~\$410,000). PI: Matthew E. Kirby (CSU at Fullerton); co-PI's: William Anderson (Florida Inter. Univ.); Steve Lund (USC)
- 2004 Late-Holocene Ecosystem response to Multi-Scale Hydrologic Disturbance in Southern California: Implications for Future Climate Change: (*not funded* at the **USDA National Research Initiative Competitive Grants Program**; ~\$416,000). PD: Matthew E. Kirby (CSU at Fullerton); co-PD's: William Anderson (Florida Inter. U.); Steve Lund (USC); Christopher Poulsen (U. of Michigan); and Roger Byrne (UC Berkeley)
- 2004** DEVELOPING LATE-HOLOCENE RECORDS OF FLOOD-PRODUCING, PRECIPITATION VARIABILITY FROM SMALL LAKES IN SOUTHERN CALIFORNIA: (**funded** at The **American Chemical Society/Petroleum Research Fund**; \$35,000). PI: Matthew E. Kirby (CSUF).
- 2003** DETERMINATION OF SEDIMENTATION RATE AND SEDIMENTATION PROCESSES AT BIG BEAR LAKE AND BALDWIN LAKE: USING A PALEO-PERSPECTIVE TO UNDERSTAND MODERN SEDIMENTARY SYSTEMS: **BBMWA**; **funded**: \$31,796. PI: Matthew Kirby (CSUF)

- 2003** Developing A Baseline Of Natural Lake-Level Variability Over The Late-Holocene: A Paleo-Perspective For Management Of Modern Lake Elsinore: **LESJWA**; **funded**: \$45,015. PI: Matthew Kirby (CSUF); co-PI's: Steve Lund (USC) and Christopher Poulsen (UM) with Dr. Michael Anderson on an attached contract (UCR) ~\$6,500.
- 2003** ACQUISITION OF A RAPID SEDIMENT GRAIN SIZE ANALYZER: (**RUI NSF-IF**; **funded**: \$44,445). PI: Matthew E. Kirby
- 2003 ACTIVE FAULTING AND TECTONIC EVOLUTION OF THE LAKE ELSINORE PILL-APART BASIN: COLLABORATIVE RESEARCH WITH CALIFORNIA STATE UNIVERSITY, LONG BEACH AND LEGG GEOPHYSICAL: **USGS NEHRP**; *not funded*: ~\$40,000. PI: Dan Francis (CSULB) and Mark Legg (Legg Geophysical); (consultant: Matthew Kirby [CSUF]).
- 2003** PRELIMINARY ASSESSMENT OF CRYSTAL LAKE (SOUTHERN CALIFORNIA) AS A PALEOPRECIPITATION ARCHIVE: A MULTI-PROXY APPROACH: **CSUF Undergraduate Research and Creativity Award**; **funded**: \$1000. PI: Matthew E. Kirby (CSUF) and Ms. Margie DeRose (B.Sc. Geology major candidate).
- 2003** HOLOCENE HISTORY OF WATER CYCLE DYNAMICS AS RECORDED IN SEDIMENTS FROM A HIGH ALPINE LAKE IN SOUTHERN CALIFORNIA (BALDWIN LAKE): **California State Special Fund for Research, Scholarship, and Creative Activity** (Junior Faculty); **funded**: ~\$5,000. PI: Matthew E. Kirby (CSUF).
- 2002 ASSESSING THE LATE-PLEISTOCENE/HOLOCENE RELATIONSHIP BETWEEN LAKE-LEVEL CHANGE AND LAKE PRODUCTIVITY: A MULTI-PROXY APPROACH FROM A SHALLOW, RIFT-BASIN LAKE (LAKE ELSINORE, SOUTHERN CALIFORNIA): (*not funded* at The **American Chemical Society/Petroleum Research Fund**; ~\$35,000). PI: Matthew E. Kirby (CSUF).
- 2002 INVESTIGATION OF HOLOCENE LOW-FREQUENCY HYDROLOGICAL VARIABILITY IN WESTERN NORTH AMERICA: (*not funded* at **NSF-Earth Sciences Water Cycle Research**; ~\$392,000). PI: Matthew E. Kirby (CSUF); Co-PI's: Steve Lund (USC), Christopher Poulsen (USC), and William Anderson (FIU).
- University of Southern California, Los Angeles, CA
- 2001 DEVELOPING SPATIAL-TEMPORAL PATTERNS OF HOLOCENE HYDROCLIMATIC VARIABILITY OVER WESTERN NORTH AMERICA; (*not funded* at **NSF-ESH**; ~\$85,000). Co-author with Christopher Poulsen (PI) and Steve Lund (PI) (USC).
- Syracuse University, Syracuse, NY
- 2000** Geological Society of America Graduate Research Grant (\$1500)
- 1998** Syracuse University Creative Graduate Research Grant (\$1500)
- 1997** Geological Society of America Graduate Research Grant (\$1500);
Syracuse University Creative Graduate Research Grant (\$1500);

Sigma Xi Graduate Research Grant (\$700)

Canisius High School, Buffalo, NY

1996

Montante Trust Excellence in Teaching Grant (\$2700)

Awards Received.

- | | |
|------|---|
| 2010 | Hamilton College, Clinton, NY: Promoted to Full Member Sigma Xi - The Scientific Research Society |
| 2009 | California State University, Fullerton, CA: Faculty Award for Outstanding Research ; School of Natural Sciences and Mathematics |
| 2008 | California State University, Fullerton, CA: Outstanding Faculty Recognition Teacher-Scholar Award (Service Learning) |
| 2007 | California State University, Fullerton, CA: Outstanding Scholarly and Creative Activity Recognition Award |
| 2006 | California State University, Fullerton, CA: Outstanding Service Recognition Award |
| 2005 | California State University, Fullerton, CA: Award for Outstanding Untenured Faculty ; School of Natural Sciences and Mathematics |
| 2004 | California State University, Fullerton, CA: Outstanding Scholarly and Creative Activity Recognition Award |
| 2001 | Syracuse University, Syracuse, NY: Newton E. Chute Outstanding Geology Graduate Student Award |
| 2001 | Syracuse University, Syracuse, NY: Future Professoriate Program (Teaching Associate) Award |
| 2001 | Syracuse University, Syracuse, NY: Summer Research Fellowship |
| 1999 | Syracuse University, Syracuse, NY: Future Professoriate Program (Teaching Associate) Award |
| 1999 | Syracuse University, Syracuse, NY: Newton E. Chute Outstanding Geology Graduate Student Award |
| 1993 | Hamilton College, Clinton, NY: Elihu Root Grant |
| 1993 | Hamilton College, Clinton, NY: Elected as Associate Member to Sigma Xi - The Scientific Research Society |

Professional Memberships.

Geological Society of America; American Geophysical Union; Sigma Xi; American Indian Science and Engineering Society

Significant Committees/Service.

- 2023 & 2024 **President-elect:** Elected American Geophysical Union Paleoceanography and Paleoclimatology Section President
- 2022 **Convener:** AGU Session
- 2022 **Panelist:** California Forum for Diversity in Graduate Education
- 2022- **Board of Governors:** CSU Desert Studies Center
- 2022- **Core Committee Member:** CSUF Department of Geological Sciences GIF (Geosciences Inclusivity Forum)
- 2022- **Award Committee:** AGU Science for Solutions Award Committee
- 2022- **Committee Member:** CSUF Athletics Exception Committee
- 2021-2022 **Committee Member:** CSUF CNSM DEI Committee for Undergraduate Research
- 2021 **Organizing Committee:** 3rd Annual SoCal Geomorphology Symposium
- 2021 **Panelist:** California Forum for Diversity in Graduate Education
- 2021 **Mentor:** Meeting of the Mind: Supporting Present and Future Geoscience Educators at local 2YCs and 4YCs (mentee UCI graduate student)
- 2021 **Committee:** CSU 2021 Water Resources and Policy Initiatives (WRPI) Conference Planning Committee
- 2020 **Mentor:** CSUF Office of Research and Sponsored Projects Faculty Mentor Program (mentee: Dr. Sarah Grant [CSUF Anthropology])
- 2019 & 2020 **Search Committee Member:** CSUF Office of Research and Sponsored Projects Search Committee for the Manager of Research Development position
- 2018 **Convener:** AGU Session
- 2018 & 2019 **Committee Member:** AGU Harry Elderfield Student Paper Award Committee
- 2017 & 2018 **Secretary:** Elected American Geophysical Union Paleoceanography and Paleoclimatology Focus Group Secretary (2-year term)
- 2017 **Convener:** AGU Session
- 2016 **Coordinator:** American Geophysical Union Meeting Outstanding Student Presentation Award (OSPA) coordinator for Paleoceanography and Paleoclimatology Focus Group
- 2016-2022 **Faculty Mentor:** Titan Athletics Faculty Mentor for CSUF Men's Soccer Team
- 2016 **Convener:** AGU Session
- 2016 **Convener:** GSA Session

- 2016-17 **Search Committee Member:** CSUF NSM Representative for the Search for AVP of Research and Sponsored Programs
- 2015, 2018
2019, 2020,
2021, 2022 **Chair:** CSUF Department of Geological Sciences Department Personnel Committee Chair
- 2015 **Coordinator:** American Geophysical Union Meeting Outstanding Student Presentation Award (OSPA) coordinator for Paleoceanography and Paleoclimatology Focus Group
- 2015 **Steering Committee:** 6th International Limnogeology Congress Meeting
- 2015 **Search Committee Member:** CSUF NSM Dean Search
- 2015, 2016 **Award Committee:** AGU Dansgaard Mid-Career Award (<http://honors.agu.org/scientific-contribution/paleoceanography-and-paleoclimatology/>)
- 2015 **Co-Convenor:** On the Cutting Edge - Professional Development for Geoscience Faculty; Preparing for an Academic Career in the Geosciences: Workshop for Graduate Students and Post-Doctoral Fellows
- 2014 **Host:** Sinkholes: Swallowed Alive, National Geographic TV Special, Director: Lisa Quijano Wolfinger, <https://www.natgeotv.com/ca/sinkholes-swallowed-alive>
- 2014 **Scientist:** North America Inside Out, Discovery Channel, Director: Rushmore Denooyer, <https://www.discovery.com/shows/north-america-inside-out/episodes/north-america-inside-out>
- 2013, 2014 **Workshop Leader:** On the Cutting Edge - Professional Development for Geoscience Faculty; Preparing for an Academic Career in the Geosciences: Workshop for Graduate Students and Post-Doctoral Fellows
- 2014 **Convenor:** AGU Session
- 2014-present **Review Editor:** Frontiers in Paleoecology
- 2012-present **Award Committee:** GSA IC Russell Award (<http://www.geosociety.org/awards/divisions.htm>)
- 2011-2019 **Chair:** CSUF Department of Geological Sciences Graduate Committee
- 2010 **Panel Reviewer:** Department of Energy Office of Science Graduate Fellowship Program (30 grants reviewed)
- 2008 **Convenor:** AGU Session
- 2006 **Award Committee:** GSA Student Research Grants
- 2005 **Convenor:** GSA Session
- 2002- **Reviewer:** External Tenure Reviewer: 16
- 2002- **Paper Reviewer:** 141 reviews including: Nature, Geology, Nature Geoscience, Science Advances, Scientific Reports, Marine Geology, Environmental Science

and Technology, Hydrogeology Journal, Earth and Planetary Science Letters, Journal of Quaternary Science, Journal of Paleolimnology, Sedimentology, Paleo-3, Geomorphology, Climate Dynamics, Earth Science Reviews, AGU Special Publication Series, Global and Planetary Change, Boletín de la Sociedad Geológica Mexicana, Earth Surface Processes and Landforms, Journal of Arid Environments, Boreas, Quaternary International, Quaternary Science Reviews, Geophysical Research Letters, Quaternary Research, Holocene, The Geological Society Special Publications, The Holocene, Earth Surface Dynamics, SEPM Special Publications, Frontiers Earth Science, Continental Shelf Research, Journal of Sedimentary Research, Climate of the Past

- 2002- **Grant Reviewer:** 76 reviews including: National Science Foundation, Petroleum Research Fund, Natural Environment Research Council, Israeli Science Foundation, Climate Change Data and Detection Program, National Park Service, ANR, Natural Sciences and Engineering Research Council of Canada (NSERC)
- 20XX **Panelist:** National Science Foundation P2C2 Program (confidential)
- 2002-03 **Co-Editor:** AGU Monograph (Antarctic Research Series): Antarctic Peninsula Climate Variability: A Historical and Paleoenvironmental Perspective.
- 2002 **Steering Committee Member:** "Climate Variability of the Antarctic Peninsula: An Historical and Paleoenvironmental Perspective": NSF - Office of Polar Programs 50/50 sponsored workshop with Hamilton College Environmental Studies Program. Hamilton College, Clinton, NY.
- 1997-01 **Founder:** Geology Graduate Student Seminar Series (IGG's BLT): Developed, Organized, Promoted. Syracuse University, Syracuse, NY: seminar series still active as of 2020 under new name (Waggoner Geology Graduate Seminar - WAGGS).

Students Advised (bold = complete; red = MS). *Statistics:* Total advised n = 68 (MSc n = 18; BS/BA = 49; Female n = 38 Hispanic n = 20). As of 1/21/22

- (68) 2022- Matias Gibertoni: B.S. Geology in progress for F24. Mojave Lake NSF Project.
- (67) 2022- Richard Franco: B.A. Geology in progress for SP24/F24. Tule Lake, CA MS, TOM, SSC. LSAMP
- (66) 2022- Matthew Garcia: B.S. Geology in progress for SP24. TBA.
- (65) 2022- Alondra Ruiz: B.A. Geology in progress for SP24. Mojave Lake NSF Project. \$1000 from grant for summer work (to be paid in Jan 24)
- (64) 2021- William Bourbois: B.A. Geology in progress for SP23. Chino Hills State Park.
- (63) 2021-2023 **Ashley Hansen:** B.S. Geology *graduated* May 2023. Thesis Title: Landscape Modification by Fire in Chino Hills State Park. 35pp. **(#35)**
- (62) 2021- Jessica Saunders: B.A. Geology in progress for SP23. Kelly Lake, CA.
- (61) 2021- Raquel Carmona: B.S. Geology in progress for SP23. Chino Hills State Park.
- (60) 2021- Nick Burdy: B.S. Geology in progress for SP23. Kelly Lake, CA.

- (59) 2021-2023 **Samuel Hippard**: B.A. Geology *graduated* May 2023. Thesis Title: An Analysis of Late Holocene Floods in the Carrizo Plains Sag Pond, Southern California. 34pp. (#34)
- (58) 2021- **Daisy Quiroz**: M.Sc. Geology. *Big Lake, CA Holocene lake history.*
- (57) 2020-2022 **Christian Novich**: B.S. Geology *graduated* August 2022. Carrizo Lake CLPC21-4 Flood Events. (#33)
- (56) 2020-2022 **Ashley Scholder**: B.S. Geology *graduated* August 2022. Thesis Title: Geological Evidence for Salton Sea Lake Level Change During the Holocene. 34pp. (#32)
- (55) 2020-2022 **Sophia O'Barr**: B.S. Geology *graduated* August 2022. Thesis Title: If Only Some Mud from a Maddox Lake Sediment Core Could Tell the Recent Holocene Lake-Level and Paleoclimatology Changes in Northern California...oh wait! 35pp. (#31)
- (54) 2019-2021 **Jin Woo Im**: B.S. Geology *graduated August 2021*. Thesis Title: Inferring Holocene Lake Level Changes Using Sediments from Kelly Lake, California. 29pp. (#30)
- (53) 2019-2021 **Tracy Donelli**: B.S. Geology *graduated August 2021*. Thesis Title: A Holocene Lake Level History at Big Lake, California. 33pp. (#29)
- (52) 2019-2021 **Daisy Quiroz**: B.A. Geology. *graduated May 2021*. Thesis Title: Reconstructing the Holocene Lake Level Record for Big Lake, California. 45pp. (#28)
- (51) 2019-XX **Leslie Velvarde**: B.S. Geology *switched majors*
- (50) 2018-2020 **Jazleen Barbosa**: B.S. Geology. *graduated August 2020*. Thesis Title: 9,000 years of paleohydrological history inferred using lacustrine sediments from Maddox Lake, CA. 17pp. (#27)
- (49) 2018-2020 **Lacy Fitzgerald-Boggis**: B.A. Geology *Finished Fall 2019*. Holocene climate change using sediment from North Yolla Bolly Lake, CA. (#24)
- (48) 2018-2020 **Kyle Campbell**: B.S. Geology. *Finished Fall 2019*. Tule Lake, CA Holocene runoff history. (#26)
- (47) 2018-2020 **Stephanie Hernandez**: B.A. Geology. *Finished Fall 2019*. Tule Lake, CA Holocene lake level history. (#25)
- (46) 2018-2022 **Hank Dickey**: M.Sc. Geology *graduated Summer 2022*. Thesis Title: USING LAKE SEDIMENTS TO INFER THE LATE-GLACIAL HYDROLOGIC CONDITIONS OF PLUVIAL LAKE MOJAVE, CALIFORNIA. 78pp.
- (45) 2018-2019 **Adam Rueckert**: M.Sc. Environmental Studies project *graduated May 2019*; Thesis Title: Evidence for a sustained late Holocene dry period in the North Coast Range of California (Barley Lake, CA). 48pp.
- (44) 2018- **Alex Woodward**: M.Sc. Geology *in progress for F20*. North Yolla Bolly Lake, CA.

- (43) 2017-2019 **Judith Avila**: B.Sc. Geology *graduated May 2019*. Thesis Title: A 10,000 Year Water History Inferred from North Yolla Bolly Lake Sediments, California. 54pp. (#22)
- (42) 2016-2018 **Justin Blyar**: B.Sc. Geology *graduated December 2018*. Thesis Title: Reconstructing Late Holocene Climate Using Sediments from Barley Lake, California. 38pp. (#21)
- (41) 2016-2020 **Christine La Munyon**: B.A. Geology *graduated summer 2020*. Thesis Title: A Late Holocene Reconstruction of Water History in Northern California Using Sediments from Barley Lake, CA. 31pp. (#26)
- (40) 2016-2021 **Jenifer Leidelmeijer**: M.Sc. Geology *graduated August 2021*. Thesis Title: Reconstructing limnological and Hydrological change during the late glacial to early Holocene and tracking the western United States precipitation dipole using sediments from Barley Lake. 137pp.
- (39) 2015-2017 **Hogan Rangel**: B.Sc. Geology *graduated May 2017*. Thesis Title: Statistical Analysis of the Relationship Between Coastal Precipitation and Desert Precipitation Across Southern California. 47pp. (#20)
- (38) 2015-2016 **Corey Stout**: B.Sc. Geology *graduated December 2016*; Thesis Title: Reconstruction of hydrologic variability during the last 1,200 years using sediments from Ford Lake in the Mojave Desert, California. 35pp. (#19)
- (37) 2014-2016 **Brenna Hess**: B.A. Geology *graduated May 2016*; Thesis Title: Reconstruction of fire and climate from the Ford Lake sediments: southeast Mojave Desert, California. 33pp. (#18)
- (36) 2014-2016 **Stefanie Mayer**: M.Sc. Geology *graduated January 2016*; Thesis Title: A 1200 Year History of Hydrologic Variability Using Sediment From Ford Lake, CA. 101pp.
- (35) 2014-2017 **Emily Silveira**: M.Sc. Geology *exited MS program in Spring 2017*.
- (34) 2014-2105 **Anh Tran**: B.S. Geology *graduated May 2015*; Thesis Title: Examining modern and paleo tidal channel deposits from Seal Beach: Insight to Paleotsunami Studies. 30pp. (#15)
- (33) 2014-2015 **Megan Murphy**: B.S. Geology *graduated Fall 2015*; Thesis Title: A 1300 Year Run-off Reconstruction from Crystal Lake in the San Gabriel Mountains of Southern California. 37pp. (#14)
- (32) 2014-2015 **Tracy Nguyen**: B.S. Geology *graduated Fall 2015*; Thesis Title: Reconstructing the Late-Holocene Hydrologic and Event History of Crystal Lake, CA. (*partial*)
- (31) 2013-2018 **Jennifer Palermo**: M.Sc. Geology *graduated May 2018*; Thesis Title: Reconstruction of late Holocene hydrologic variability in coastal southwest United States using lake sediments from Crystal Lake, CA: A stormy affair? 94pp.
- (30) 2013-2015 **Andrea Arevalo**: B.S. Geology *graduated Fall 2015*; Thesis Title: Using Ostracods from Silver Lake Sediments to Reconstruct 15,000 Years of Hydrologic Variability. 25pp. (#16)

- (29) 2013-2015 **Alexandre Woodward**: B.S. Geology *graduated Fall 2015*; Thesis Title: Did Alpine Glaciers Exist on Sugarloaf Mountain During the Last Glacial (San Bernardino Mountains, California)? 22pp. (#17)
- (28) 2013-2014 **Dylan Garcia**: B.A. Geology *graduated August 2014*; Thesis Title: Searching for a Paleotsunami Record at Seal Beach, Southern California. 28pp. (#13)
- (27) 2013-2014 **Emily Silveira**: B.A. Geology *graduated May 2014*; Thesis Title: Reconstructing hydrologic change over the past 96,000 years using sediments from Baldwin Lake, San Bernardino County, California. 35pp. (#12)
- (26) 2012-2015 **Christine Hiner**: M.Sc. Geology *graduated January 2015*; Thesis Title: Tracking the Western North American Hydrologic Dipole During the Late Holocene Using Lake Sediments from Abbott Lake, California. 87pp.
- (25) 2012-2015 **Holly Eeg**: B.A. Geology *graduated Fall 2015*; Thesis Title: Early to Late Holocene Paleoclimate Reconstruction Using Sediment Cores from Silver Lake, Mojave Desert, California. (draft only)
- (24) 2011-2015 **Khadija Nadimi**: M.Sc. Geology *graduated Fall 2015*; Thesis Title: SEARCHING SAN ELIJO LAGOON, SOUTHERN CALIFORNIA FOR PALEOTSUNAMI EVIDENCE. 100pp.
- (23) 2010-2019 **Nicoletta Bozhilova**: B.Sc. Geology *Finished Fall 2019*; Characterizing and explaining the distribution of modern surface sediments at Zaca Lake. (#23)
- (22) 2010-2013 **Lilian Rubi**: B.Sc. Geology *graduated May 2013*; Thesis Title: Reconstructing Late Holocene Lake Level Using Littoral Cores From Zaca Lake, California. 28pp. (#11)
- (21) 2010-INC Douglas Grant: B.Sc. Geology *not enrolled*; Project Focus: Strange carbonate nodules preserved in lake sediments from Overflow Lake, California.
- (20) 2008 -2010* **Baird King**: M.Sc. Geology *graduated August 2010*; Thesis Title: The Post-Last Glacial Maximum Glacier Record for the Tamarack Bench, Eastern Sierra Nevada, California. *committee member for University of California, Riverside MSc project (I was responsible for advising all sedimentological analyses and interpretations)
- (19) 2010-2011 **Christine Hiner**: B.Sc. Geology *graduated January 2012*; Thesis Title: Last Glacial Maximum Paleoclimate Reconstruction Using Sediments from Lake Elsinore, California. 31pp. (#10)
- (18) 2009-2011 **Joanna Fantozzi**: M.Sc. Geology *graduated August 2011*; Thesis Title: Reconstruction of Hydrologic Variability at Lake Elsinore, California, During the Late-Glacial to Holocene Transition. 103pp.
- (17) 2009-2011 **Manuel Padilla**: B.Sc. Geology *graduate January 2011*; Thesis Title: Holocene Paleoclimate Reconstruction Using Sediments From Overflow Lake, Santa Barbara County, California. 42pp. (#9)
- (16) 2008-2009 **Hannah McDermitt**: B.Sc. Geology *graduated August 2009*; Thesis Title: Reconstruction of Late-Holocene Lake Levels at Crystal Lake, California. 40pp. (#8)

- (15) 2008-INC David Sandoval: B.Sc. Geology *not enrolled*; Project Focus: Thailand paleo-lagoons. (proposal done)
- (14) 2008-2013 **Brittany Pyke**: M.Sc. Geology *graduated August 2013*; Thesis Title: A Holocene hydroclimatic investigation of Lake Elsinore, Southern California using seismic reflection and sediment core data. 96pp.
- (13) 2007-INC Nisa Sichan: M.Sc. Geology (*left for PhD at UTEP*); Project Focus: Evaluation and Interpretation of a “Unusual” Stranded Delta on Baldwin Lake, CA: Implications for Past Climate. (proposal done)
- (12) 2007-2008* **Bradley Markle**: B.Sc. Geology graduated *May 2008*; Thesis Title: The Occurrence and Climatic Implications of a Rapid Regression of Lake Elsinore, CA, During the Last Glacial Maximum. 52pp. plus figures. *major project advisor for Pomona College B.Sc. senior thesis. (#7)
- (11) 2007-2008 **Shauna Nielsen**: B.Sc. Geology *graduated August 2008*; Project Focus: Grain Size Change During the Late-Holocene as a Proxy for Lake Level (Lake Elsinore, CA). (proposal done; final thesis draft incomplete)
- (10) 2007-2009 **Lauren Rivera-Mirallegro**: B.Sc. Geology *graduated May 2009*; Thesis Title: Reconstructing Holocene Climate Using Sediments From Ancestral Big Bear Lake, San Bernardino County, California. 50pp. (#6)
- (9) 2007-2008 **Luissa Ivanovici**: B.Sc. Geology *graduated May 2008*; Thesis Title: Examination of an unusual sediment unit dated 4,800 calendar years before present: flood or drought (Lake Elsinore, CA)? 50pp. (#5)
- (8) 2006-2007 **Jenn Schmidt**: B.Sc. Geology *graduated August 2007*; Thesis Title: Possible paleo-tsunami deposits from a coastal lagoon paleoenvironment in Kamala Beach, Thailand. 54pp. (#4)
- (7) 2006-2009 **Mark Gotts**: B.Sc. Geology *graduated January 2010*; Thesis Title: A Sediment Provenance Study for Baldwin Lake, San Bernardino County, California. 33pp. (#3)
- (6) 2006-2007 **Joe Carrasco**: B.Sc. Geology *graduated August 2007*; Thesis Title: Evidence for rapid lake level change during the last glacial maximum in Southern California (Lake Elsinore). 39pp. (#2)
- (5) 2005-2008 **Michael Blazevic**: M.Sc. Geology *graduated January 2008*; Thesis Title: Paleoenvironmental Reconstruction of a Glacial-age Sediment Core From Baldwin Lake, Southern California: Evidence for Multi-timescale Climate Variability. 82pp.
- (4) 2004-INC Jose Rivera: M.Sc. Geology *unfinished*; Project Focus: Ancestral Bear Lake as an archive of centennial scale Holocene climate variability. (proposal done).
- (3) 2004-2009 **Daniel Bergin**: M.Sc. Environmental Studies *graduated August 2009*; Project Title: Crystal Lake, Use of Multi-Proxy Methodology to Date the Landslide, Which Resulted in Its Creation. 96pp.
- (2) 2003-2005 **Broxton W. Bird**: M.Sc. Geology *graduated May 2005*; Thesis Title: A 9000-Year Record of Long-Term Climate Change and Abrupt Climate Events from Dry Lake, Southern California. 90pp.

- (1) 2003-2004 **Margie DeRose**: B.Sc. Geology *graduated May 2004*; Thesis Title: Preliminary Assessment of Crystal Lake, California as a Paleoclimate Archive: A Multi-Proxy Approach. 33pp. (#1)

Invited Talks (*not* including National and Regional Research Conferences [e.g., GSA, AGU, AAG, etc.]).

- 63) 2022 **California Water Control Board Geology Symposium**
- 62) 2022 **UC Santa Barbara** Department of Earth Science Seminar Series
- 61) 2021 **International Union for Quaternary Research (INQUA)** Stratigraphy and Chronology Commission (SACCOM) Virtual Seminar Series
- 60) 2021 **Hamilton College** Virtual Alumni Talk Series
- 59) 2019 **Dana Point Science Night** Talk.
- 58) 2019 **Chiang Mai University**. Department of Geological Sciences
- 57) 2019 **Elsinore Valley Municipal Water District**. City of Lake Elsinore.
- 56) 2019 **CSUF** Library Faculty Noontime Talks.
- 55) 2019 **Los Angeles Basin Geological Society** Talk. Long Beach.
- 54) 2018 **CEPSYM Conference** at UC Davis. Invited Speaker.
- 53) 2018 **CSDCO Workshop** in Arlington, VA.
- 52) 2018 **CSUF CCAMS** Grant Happy Hour.
- 51) 2018 **MUCH Workshop** (A Multi-proxy lacustrine approach to Understanding the Climatic and environmental History in semi-arid western India) at Minneapolis, MN. Invited Speaker.
- 50) 2018 **Fullerton College Natural Sciences Seminar**.
- 49) 2018 **Southwest Extreme Precipitation Symposium (SWEPSYM)** at SCRIPPS Institute of Oceanography. Invited Speaker.
- 48) 2017 **CSUF Research Festival Day: Connecting Faculty with Campus Collaborators**. Invited Keynote Speaker.
- 47) 2016 **SoSAFE workshop at the Southern California Earthquake Center (SCEC) Annual Fall Meeting**: Invited Speaker
- 46) 2016 **Binghamton University Lecture Series**: A Muddy Perspective on Past Climate.
- 45) 2016 **American Chemical Society – Orange County Section**: 2016 special dinner meeting for the outstanding college chemistry students in Orange County, CA
- 44) 2016 **University of California, Riverside Seminar Series**: Department of Earth Sciences. 15,000 Yrs of Drought and Pluvials in the Coastal Southwest United States.

- 43) 2015 **California State University, Fullerton Dept. of Biology Lunch with Organisms Lecture Series:** A Paleoperspective of CA's Drought.
- 42) 2015 **Orange County Natural History Lecture Series:** A Paleoperspective of CA's Drought.
- 41) 2015 **Coastal Geological Society:** Mega Droughts of the Holocene.
- 40) 2015 **South Coast Geological Society:** Summer meets winter in the Mojave.
- 39) 2015 **Wright State University:** Using Lake Sediments to Assess California's Modern Epic Drought
- 38) 2014 **University of Nevada, Las Vegas Geosciences:** Mojave Hydroclimates Over the Past 14,000 cal yrs BP.
- 37) 2014 **International Geobiology Course (USC):** 33,000 Years of Hydrologic Change in the Coastal Southwest US.
- 36) 2014 **UC Santa Barbara:** 33,000 Years of Hydrologic Change Recorded in the Lakes of Southern California: A History of Droughts, Floods, and Abrupt Change!
- 35) 2013 **San Bernardino County Museum Lecture Series:** 15,000 Years of Hydrologic Change Recorded in the Lakes of Southern California: A History of Droughts, Floods, and Abrupt Change!
- 34) 2012 **City of Fullerton Library Town and Gown Lecture Series:** 60,000 Years of Past Climate Change in Southern California
- 33) 2011 **USGS Menlo Park:** Piecing Together Late-Quaternary Terrestrial Climate Change in Coastal Southwest North America.
- 32) 2010 **Southern California Botanists Symposium:** Muddy Secrets From the Rare Mountain Lakes of Southern California: 70,000 Years of Climate Change.
- 31) 2009 **University of Southern California:** A tale of Holocene climate as told by the lakes of Southern California
- 30) 2009 **Cal-State Northridge:** A tale of Holocene climate as told by the lakes of Southern California
- 29) 2009 **Inland Geological Society:** A tale of Holocene climate as told by the lakes of Southern California
- 28) 2008 **University of California, Riverside:** A tale of Holocene climate as told by the lakes of Southern California
- 27) 2008 **Long Beach Methodist Church:** Global Warming – A Case Study of Human Action and Inaction?
- 26) 2008 **CSUF 50th Anniversary Research Celebration:** Establishing a Baseline of Past Hydrologic Variability in Southern California for Better Water Management Practices

- 25) 2008 **CSUF NSM-ICC Research Symposium:** Establishing a Baseline of Past Hydrologic Variability in Southern California for Better Water Management Practices
- 24) 2007 **Cal-State Northridge:** Muddy Perspectives on Climate Change in Southern California
- 23) 2007 **CSUF Honors Program Plenary Talk:** Global Warming – A Case Study of Human Action and Inaction?
- 22) 2007 **CSUF OLLI Program:** Global Warming – A Case Study of Human Action and Inaction?
- 21) 2007 **Long Beach Methodist Church:** Global Warming – A Case Study of Human Action and Inaction?
- 20) 2006 **California State University, Long Beach:** Muddy Perspectives on Climate Change in Southern California
- 19) 2005 **Idaho State University:** Muddy Perspectives on Past Climate
- 18) 2005 **Fullerton Community College:** What Lake Mud Tells Us About Climate in Southern California
- 17) 2005 **Lake Elsinore/San Jacinto Watershed Authority Board of Directors:** Final Results: Lake Level Dynamics and Lake Productivity Over 10,000 Years.
- 16) 2005 **Big Bear Municipal Water District:** DETERMINATION OF SEDIMENTATION RATE AND SEDIMENTATION PROCESSES AT BIG BEAR LAKE: USING A PALEO-PERSPECTIVE TO UNDERSTAND MODERN SEDIMENTARY SYSTEMS.
- 15) 2005 **CEA-CREST 2005 Annual Meeting:** Special Session on Arid Zone Hydrology: What Lakes in Southern California's Arid Environment Tell Us About Past and Future Climate Variability.
- 14) 2005 **Lake Elsinore/San Jacinto Watershed Authority:** Final Results: Lake Level Dynamics and Lake Productivity Over 10,000 Years.
- 13) 2005 **University of California, Riverside:** Department of Earth Sciences. "Muddy Perspectives on Southern California's Climate History"
- 12) 2005 **Cal-State Fullerton:** Department of Geological Sciences Special Seminar. "The Great Indonesian Earthquake and Tsunami: What Happened, and Could It Happen Here?" Dr. David Bowman, Dr. Matt Kirby and Dr. Brady Rhodes
- 11) 2005 **San Diego State University:** Department of Geological Sciences. Muddy Perspectives on Earth's Climate History.
- 10) 2005 **UC San Diego/SCRIPPS Research Institute:** A Muddy Perspective on Southern California's Climate History.
- 9) 2004 **Cal-State Fullerton:** Department of Biological Sciences Seminar Series. Late Quaternary Climate Change Inferred From Lake Sediments in Southern California.

- 8) 2004 **Lake Elsinore/San Jacinto Watershed Authority:** Drill cores from Lake Elsinore: Preliminary Results II.
- 7) 2004 **San Diego State University,** Department of Geological Sciences: Insight to Holocene Climate Dynamics From Lakes in Coastal Southwestern North America
- 6) 2003 **Lake Elsinore/San Jacinto Watershed Authority:** Drill cores from Lake Elsinore: Preliminary Results I.
- 5) 2003 **Santa Ana Regional Water Quality Control Board:** 200 Years of Lake Sedimentation at Lake Elsinore, CA.
- 4) 2003 **Lake Elsinore/San Jacinto Watershed Authority:** The Past, Present, and Future of Lake Elsinore: A Lake on the Edge!
- 3) 2003 **South Coast Geological Society:** So Little Water, So Many People? What Lake Sediments Tell Us About the Past (4/8/2003).
- 2) 2002 **Cal-State Fullerton** Department of Geological Sciences Seminar Series.
- 1) 2002 **Florida International University:** Using Modern Calibrated Isotope Data to Model Late-Glacial/Holocene Atmospheric Circulation Patterns and Paleo-Precipitation (2/22/2002).

References.

Upon Request