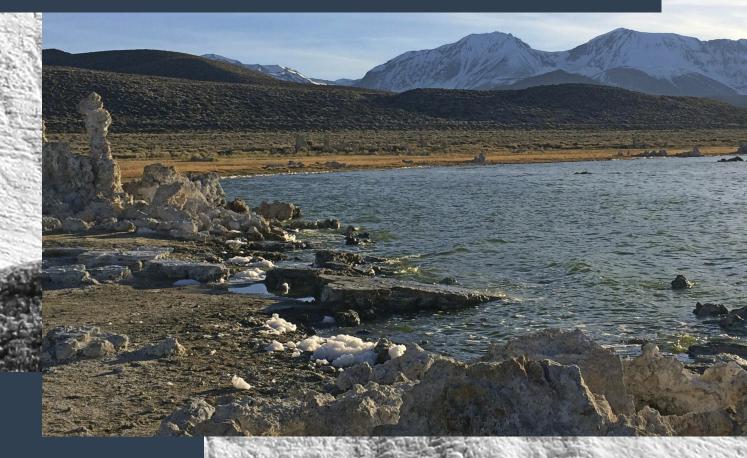
# OR QUATERNARY RESEARCH



## **EDITORS**

Derek B. Booth Nicholas Lancaster Lewis A. Owen

CAMBRIDGE UNIVERSITY PRESS

### **Quaternary Research**

Published on behalf of Quaternary Research Center www.cambridge.org/core/journals/quaternary-research

### Volumes 117-122 eISSN: 1096-0287; ISSN: 0033-5894

### **Editors**

Derek B. Booth, University of Washington

Nicholas Lancaster, Desert Research Institute

Lewis A. Owen, North Carolina State University

### **Associate Editors**

Lesleigh Anderson, U.S. Geological Survey

Pat Bartlein, University of Oregon

Louisa Bradtmiller, Macalester College

John Dodson, Institute of Earth Environments, Xi'an, China and University of Wollongong

Jason Dortch, University of Kentucky

Mary Edwards, University of Southampton and University of Alaska

Tyler Faith, Natural History Museum of Utah and University of Utah

Jaime Urrutia Fucugauchi, National University of Mexico and Instituto de Investigacion y Estudios Avanzados Chicxulub

Radu Iovita, New York University

Kathleen R. Johnson, University of California, Irvine

Terri Lacourse, University of Victoria

Pete Langdon, University of Southampton

Thomas Lowell, University of Cincinnati

Curtis W. Marean, Arizona State University

Jim O'Connor, U.S. Geological Survey

Wyatt Oswald, Emerson College

Yeong Bae Seong, Korea University

James (Jamie) Shulmeister, University of Canterbury, Christchurch

Ximena Villagran, Museu de Arqueologia e Etnologia, Universidade de São Paulo

Xiaoping Yang, Zhejiang University

### **Editorial Board**

Zhisheng An, Institute of Earth Environment, Chinese Academy of Sciences

Gail Ashley, Rutgers University

Julie Brigham-Grette, University of Massachusetts

John Dodson, Institute of Earth Environments, Xi'an, China and University of Wollongong

Yehouda Enzel, Hebrew University of Jerusalem

David Fink, Australian Nuclear Science and Technology Organisation

Sheri Fritz, University of Nebraska – Lincoln

Alan R. Gillespie, University of Washington

Lisa Graumlich, University of Washington

Vance T. Holliday, University of Arizona

Richard G. Klein, Stanford University

Melanie Leng, British Geological Survey, University of Nottingham

Danial R. Muhs, U.S. Geological Survey

Colin V. Murray-Wallace, University of Wollongong

Jay Quade, Department of Geosciences, University of Arizona

Maria Socorro Lozano-Garcia, Universidad Nacional Autónoma de México

Cathy L. Whitlock, Montana State University

Yurena Yanes, University of Cincinnati

Liping Zhou, Peking University

Information about editors and editorial board members correct as of 1st January 2024. For the latest information please see https://www.cambridge.org/core/journals/quaternary-research/editors-and-advisory-board

### Aims & Scope

Quaternary Research is an international journal devoted to the advancement of the interdisciplinary understanding of the Quaternary Period. We aim to publish articles of broad interest with relevance to more than one discipline, and that constitute a significant new contribution to Quaternary science. The journal's scope is global, building on its 50-year history in advancing the understanding of Earth and human history through interdisciplinary study of the last 2.6 million years.

Research areas include geoarcheology, geochemistry and geophysics, geochronology, geomorphology, glaciology, neotectonics, paleobotany and paleoecology, paleoclimatology, paleogeography, paleohydrology, paleontology, paleoceanography, paleopedology, Quaternary geology, volcanology and tephrochronology.

### **Quaternary Research Center**

The QRC is a community of scholars collaborating and fostering interdisciplinary environmental research at the University of Washington through strategic investments in seed grants, expeditions, seminars, workshops, and the publication of *Quaternary Research*.

© University of Washington Published by Cambridge University Press.





# **QUATERNARY RESEARCH**

Volume 122, November 2024

### CONTRIBUTION TO THE QR FORUM

1 The selective geography of volcanism in oral traditions Leigh Franks, Patrick D. Nunn and Adrian McCallum

### RESEARCH ARTICLES

- Unravelling 6000 years of interplay among environmental changes, anthropogenic activities, and Vesuvius eruptions in the upper Sarno Plain (Campania, Italy)
  Elda Russo Ermolli, Halinka Di Lorenzo, Nicoletta Santangelo, Antonio Santo, Chiara Comegna and Paola Petrosino
- 40 New insights into the glacial and relative sea-level history of the western Fraser Lowland based on sediment cores from geotechnical drilling for the Evergreen Tunnel, British Columbia, Canada

  Lionel E. Jackson, Brent C. Ward, Stephen R. Hicock, Raphael Gromig, John J. Clague and Derek G. Turner
- 62 Insights into the synergistic effects of tectonics and climate from the formation and evolution of the Hongwen allochthonous deposit, southwestern China

  Yuchao Li, Jianping Chen, Qing Wang, Zhihai Li, Yansong Zhang and Jianhua Yan
- Sedimentation rate changes across the Chinese Loess Plateau from luminescence dating of Malan loess in the Sanmen Gorge Gang Hu, Huiying Wang, Bo Xu, Ping Wang, Liubing Xu, Jinming Xie, Xing Wang, Long Qiao, Changhui Guo, Junkang Wang, Jiafu Zhang, Wenxu Wang, La Ta and Lei Wang
- Large herbivore  $\delta^{18}$ O as a proxy for aridity in the South African winter and year-round rainfall zone *Julie Luyt, J. Tyler Faith and Judith Sealy*
- 106 Understanding the fluvial capture of the Guadix-Baza Basin in SE Spain through its oldest exorheic deposits Francisco J. García-Tortosa, Pedro Alfaro, Iván Martin-Rojas, Iván Medina-Cascales and Santiago Giralt
- 122 Sedimentologic successions and chronology of the late Pleistocene deposits on the southern Kola Peninsula, northern Europe Olga Korsakova, Anatoly Molodkov, Nataliya Zaretskaya and Vasily Grigoriev
- 143 The relevance of biotic processes on modern tufa deposits, with an example from the Bonito region, Central-West Brazil *Jéssica Thaís Ferreira Oste, Almério Barros França, Leonardo Fadel Cury and Anelize Manuela Bahniuk*

Photo Caption: View southwards from tufa towers on the shore of Mono Lake in east-central California, USA. This hypersaline alkaline lake has a productive ecosystem based on the endemic brine shrimp (*Artemia monica*) and alkali flies (*Ephydra hians*). The name "Mono" derives from "Monachi," a Yokut term for the tribes that lived on both sides of the Sierra Nevada, and the region has an archaeological record extending back into the Early Holocene. Recent freshwater diversions severely lowered lake levels starting in AD 1941. Litigation in 1994 allowed the water to steadily rise. Levels are still far short of early 20th century heights, however, partially because of many years of drought in the American West. Mono Lake Basin has a geomorphic, volcanic, glacial and lacustrine record extending beyond the early Quaternary. It has been the focus of much research over the years, including many prominent papers published in Quaternary Research on glaciation, lacustrine sedimentology, geochemistry, palynology, archeology, and climate change that exemplify the interdisciplinary emphasis of the journal (see Bursik and Gillespie, 1993, 39, 24–35; Benson et al., 1998, 49, 1–10; Davis, 1999, 52, 243–249; Madsen et al., 2002, 57, 382–390; Zimmerman et al., 2011, 76, 264–271; Bacon et al., 2018, 90, 276–302). (Photo by Lewis Owen.)