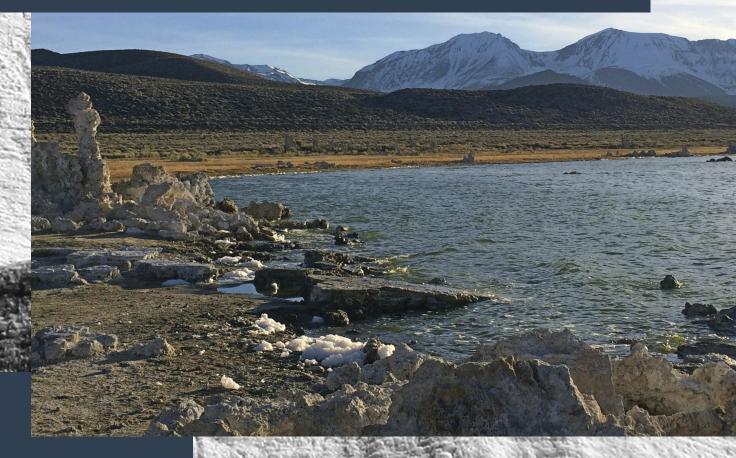


OR QUATERNARY RESEARCH



EDITORS

Derek B. Booth Nicholas Lancaster Lewis A. Owen

CAMBRIDGE UNIVERSITY PRESS

Downloade a from https://www.tambridge.org/core, IP address: 3.133.112.17, on 14 No./ 2024 at 08:22:07, subject to the Cambridge Core terms of use wailable at https://www.cambridge.org/core.

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

Guest Editors

Shiling Yang, Key Laboratory of Cenozoic Geology and Environment, Institute of Geology and Geophysics, Chinese Academy of Sciences, and College of Earth and Planetary Sciences, University of Chinese Academy of Sciences Randall J. Schaetzl, Department of Geography, Environment, and Spatial Sciences, Michigan State University Thomas Stevens, Department of Earth Sciences, Uppsala University

Associate Editors

Lesleigh Anderson, U.S. Geological Survey

Pat Bartlein, University of Oregon

Robert Booth, Lehigh University

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 120, JULY 2024

SPECIAL ISSUE: LOESS ENVIRONMENTS: GENERATION, TRANSPORT, AND DEPOSITION

Introduction to special issue: loess environments: generation, transport, and deposition Shiling Yang, Randall J. Schaetzl and Thomas Stevens

RESEARCH ARTICLES

- 3 Cryogenic features and stages in Late Quaternary subaerial sediments of the Lower Volga region N.A. Taratunina, R.N. Kurbanov, V.V. Rogov, I.D. Streletskaya, T.A. Yanina, D.A. Solodovnikov and T. Stevens
- Implications of the geochemistry of L1LL1 (MIS2) loess in Poland for paleoenvironment and new normalizing values for loess-focused multi-elemental analyses
 Jacek Skurzyński, Zdzisław Jary, Kaja Fenn, Frank Lehmkuhl, Jerzy Raczyk, Thomas Stevens and Małgorzata Wieczorek
- 36 Loess transportation surfaces in west-central Wisconsin, USA Randall J. Schaetzl
- East Asian monsoon variations in the loess–desert transitional zone (northern China) during the past 14 ka and their comparison with TraCE21K simulation results

 Yao Gu, Huayu Lu, Jingjing Wang, Hongyan Zhang, Wenchao Zhang, Chenghong Liang and Jiang Wu
- Holocene hydroclimate and dust activity, as reconstructed from the sediments of Lake Bayanchagan, on the northern margin of the East Asian summer monsoon

 Wubiao Li, Wenying Jiang, Shiling Yang, Jie Lin and Yujie Wang
- Seasonality of C₄ plant growth and carbonate precipitation in the Chinese Loess Plateau may cause positive carbon isotope anomalies in pedogenic carbonates Yang Fu, Zhengtang Guo and Guoan Wang
- 83 Soil organic carbon induces a decrease in erodibility of black soil with loess parent materials in northeast China Jingyi Cui, Licheng Guo, Shangfa Xiong, Shiling Yang, Yongda Wang, Shihao Zhang and Hui Sun

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.)