QUATERNARY RESEARCH

SENIOR EDITORS Derek B. Booth Alan R. Gillespie

ASSOCIATE EDITORS

Patrick J. Bartlein, Bax R. Barton, John Dodson, Jaime Fucugauchi, John F. Hoffecker,
Vance T. Holliday, Kathryn A. Hoppe, James C. Knox, Thomas M. Marchitto, Jr.,
Curtis W. Marean, David J. Meltzer, Daniel R. Muhs, Michael A. O'Neal, W. Wyatt Oswald,
Lewis A. Owen, Jay Quade, Gerard Roe, Ashok K. Singhvi, Xiaoping Yang

EDITORS EMERITI

A. Lincoln Washburn Estella B. Leopold Stephen C. Porter Eric J. Steig

MANAGING EDITOR

Karin Stewart-Perry

Quaternary Research Center Box 351360 University of Washington Seattle, WA 98195-1360

EDITORIAL ADVISORY BOARD

NICHOLAS LANCASTER

Desert Research Institute Quaternary Geology and Geomorphology: Africa, Southwestern United States, Desert Regions

SOCORRO LOZANO-GARCIA

Universidad Nacional Autónoma de México Sediment and Ice-core Studies: Tropical America

COLIN V. MURRAY-WALLACE

University of Wollongong Coastal Evolution; Neotectonism; Geochronology

MILAN J. PAVICH

U. S. Geological Survey Quaternary Soils: Southeastern, Mid-Continent and Southwestern United States

DAVID E. SUGDEN

University of Edinburgh Glacial Geomorphology and Landscape Evolution: Antarctica, Iceland, Northwest Europe and Patagonia

ANDREI A. VELICHKO

Russian Academy of Sciences Geography and Geomorphology: Northern Eurasia

KENNETH L. VEROSUB

University of California Paleoclimatology: China, Russia, Antarctica, and North America

CATHY L. WHITLOCK

Montana State University Paleoecology and Vegetation History: North and South America

LIPING ZHOU

Peking University Loess, Geochronology, and Geomorphology: Central Asia, East Asia

Quaternary Research is the research journal for the American Quaternary Association

Quaternary Research has no page charges. A full and complete Guide for Authors can be found at http://elsevier.com/locate/yqres.

Cover photo. Color-contoured perspective view of topography of Matanuska Valley lowlands, Alaska, showing a very large dune train with 0.9 km chord lengths and amplitudes to 34 m (red, high elevations; vertical exaggeration, 25x). These are among Earth's largest fluvially formed dunes. Dune trains are characteristic of giant floods. (For related article, see Wiedmer et al., pp. 413–424, in this issue. Image generated from USGS NED 2-second data by Laura Gilson and Harvey Greenberg.)

THURE E. CERLING

University of Utah Terrestrial Geochemistry and Cosmogenic Isotopes

JOHN DODSON

Australian Nuclear Science and Technology Organization *Quaternary Environments*

YEHOUDA ENZEL

Hebrew University of Jerusalem Desert Geomorphology

DONALD K. GRAYSON

University of Washington Archaeology and Vertebrate Paleontology: North America and Western Europe

RICHARD G. KLEIN

Stanford University Archaeology and Vertebrate Paleontology: Africa