# New Mexico GEOLOGY

November 2015 Volume 37, Number 4



New Mexico Bureau of Geology and Mineral Resources / A Division of New Mexico Tech

November 2015 Volume 37, Number 4

## New Mexico GEOLOGY

Holocene Stratigraphy and a Preliminary Geomorphic History for the Palomas Basin, south-central New Mexico *Andrew P. Jochems and Daniel J. Koning.*......77



## Cover Image

Autumn colors along Las Animas Creek, Sierra County, New Mexico. Las Animas Creek drains into Caballo Reservoir on the Rio Grande and is unique among local tributaries for having nearly year-round flow in many reaches. This flow and a shallow aquifer support native grasses and dense stands of cottonwood (*Populus fremontii*) and rare Arizona sycamore (*Platanus wrightii*). View looks northeast toward Palomas Gap in the northern Caballo Mountains.

A publication of
New Mexico Bureau of Geology and
Mineral Resources,
a division of New Mexico Institute of
Mining and Technology

Science and Service ISSN 0196-948X

New Mexico Bureau of Geology and Mineral Resources

Director and State Geologist

Matthew J. Rhoades, CPG, RG

Geologic Editor: Dr. Steven Cather

Managing Editor: Gina D'Ambrosio Production Editor: Richard Arthur Layout Design: Gina D'Ambrosio Cover image: © Andrew Jochems Cartography & Graphics: Leo Gabaldon, and Andrew Yochems

#### **EDITORIAL BOARD**

Dan Koning, NMBGMR Penelope Boston, NMIMT Barry S. Kues, UNM Jennifer Lindline, NMHU Gary S. Morgan, NMMNHS

New Mexico Institute of Mining and Technology President

Daniel H. López

### **BOARD OF REGENTS**

Ex-Officio
Susana Martinez
Governor of New Mexico

**Dr. Barbara Damron** Secretary of Higher Education

Appointed

Deborah Peacock

President. 2011–2016. Albuquerque

Jerry A. Armijo Secretary/Treasurer, 2015–2020, Socorro

> David Gonzales 2015–2020, Farmington

Donald Monette 2015–2018, Socorro

Myissa Weiss, student member 2015–2016, Farmington

New Mexico Geology is an "electronic only" publication as of 2015. Each issue is available as a free PDF download from the New Mexico Bureau of Geology and Mineral Resources website. Subscribe to receive e-mail notices when each issue is available at: geoinfo.nmt.edu/publications/subscribe

Editorial Matter: Articles submitted for publication should be in the editor's hands a minimum of five (5) months before date of publication (February, May, August, or November) and should be no longer than 20 typewritten, double-spaced pages. All scientific papers will be reviewed by at least two professionals in the appropriate field of study. Address inquines to Managing Editor, New Mexico Bureau of Geology and Mineral Resources, Socorro, New Mexico 87801; phone (575) 835-5218.

geoinfo.nmt.edu/publications/periodicals/nmg

