

Paleobiology

(ISSN 0094-8373)

Volume 37

Number 1

Winter, 2011

CONTENTS

Articles

Phylogenetic corrections for morphological disparity analysis: new methodology and case studies Stephen L. Brusatte, Shaena Montanari, Hong-yu Yi, and Mark A. Norell	1
The Neogene transition from C ₃ to C ₄ grasslands in North America: stable carbon isotope ratios of fossil phytoliths Francesca A. McInerney, Caroline A. E. Strömberg, and James W. C. White	23
The Neogene transition from C ₃ to C ₄ grasslands in North America: assemblage analysis of fossil phytoliths Caroline A. E. Strömberg and Francesca A. McInerney	50
Does extinction wield an axe or pruning shears? How interactions between phylogeny and ecology affect patterns of extinction Walton A. Green, Gene Hunt, Scott L. Wing, and William A. DiMichele	72
A ubiquitous ~62-Myr periodic fluctuation superimposed on general trends in fossil biodiversity. I. Documentation Adrian L. Melott and Richard K. Bambach	92
Statistical methods for paleodemography on fossil assemblages having small numbers of specimens: an investigation of dinosaur survival rates David Steinsaltz and Steven Hecht Orzack	113
Fossil bovid diets indicate a scarcity of grass in the Langebaanweg E Quarry (South Africa) late Miocene/early Pliocene environment Deano D. Stynder	126
The evolution of the bone-cracking model in carnivorans: cranial functional morphology of the Plio-Pleistocene cursorial hyaenid <i>Chasmaporthetes lunensis</i> (Mammalia: Carnivora) Zhijie Jack Tseng, Mauricio Antón, and Manuel J. Salesa	140
Permian-Triassic land-plant diversity in South China: Was there a mass extinction at the Permian/Triassic boundary? Conghui Xiong and Qi Wang	157
<i>Instructions for Contributors</i>	168

A quarterly journal of The Paleontological Society
© 2011 The Paleontological Society. All rights reserved.

Mailing Date: 5 January 2011

CODEN PALBBM 37(1) 1-174 (2011)

Electronic submission (PDF format) is requested: paleobiology@fimnh.ufl.edu

If electronic submission is not possible, send manuscripts to:

Courier Address:

Florida Museum of Natural History
Museum Road
University of Florida
Gainesville, FL 32611-7800

Mailing Address:

Florida Museum of Natural History
University of Florida
P.O. Box 117800
Gainesville, FL 32611-7800

You can view and download *Paleobiology* from the world wide web in four places. Volumes 1–25 are at <http://www.jstor.org>. (PDF only; requires library subscription to ecology journals within JSTOR.) Current issues back to volume 26(1) are at <http://www.bioone.org/> (with a library subscription to BioOne), and at <http://www.psjournals.org>. Titles and abstracts back to volume 22 are free at <http://allenpress.com>.

SENIOR EDITOR:

BRUCE J. MACFADDEN
Florida Museum of Natural History

CO-EDITORS:

JONATHAN I. BLOCH and DOUGLAS S. JONES
Florida Museum of Natural History

ASSOCIATE EDITORS:

MARTIN ABERHAN, Museum für Naturkunde Berlin
C. KEVIN BOYCE, University of Chicago
JAMES S. CRAMPTON, GNS Science
DAVID L. FOX, University of Minnesota
LINDA C. IVANY, Syracuse University
WOLFGANG KIESLING, Museum für Naturkunde Berlin
JENNIFER McELWAIN, University College Dublin
THOMAS OLSZEWSKI, Texas A & M University
FELISA A. SMITH, University of New Mexico
MARK D. UHEN, George Mason University
PETER J. WAGNER, Smithsonian Institution

ASSISTANT EDITOR:

NATASHA ATKINS

FOUNDING EDITORS:

THOMAS J. M. SCHOPP and RALPH G. JOHNSON



PALEOBIOLOGY (ISSN 0094-8373) is published quarterly by The Paleontological Society, 810 East 10th St., Lawrence, KS 66044, USA. Periodicals postage paid at Lawrence, KS. POSTMASTER: Send address changes to PALEOBIOLOGY, P.O. Box 1897, 810 East 10th St., Lawrence, KS 66044-8897, USA.

PALEOBIOLOGY is printed offset by Allen Press, Inc., Lawrence, KS 66044.

 This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

The Paleontological Society gratefully acknowledges Patrons of *Paleobiology* for 2011.

The Patrons Fund was established to broaden the basis of financial support for *Paleobiology* and thus to encourage paleontological publication.

\$50.00 to \$100.00,
at the discretion of the Contributor

For you, or your institution, to become a Patron, send a check payable to *Paleobiology* to:

Paleobiology Patrons Fund
P.O. Box 1897
810 East 10th Street
Lawrence, KS 66044-8897

PALEOBIOLOGY PATRONS

RICHARD P. ALVORD
RICHARD K. BAMBACH
MICHAEL G. BASSETT
ANNA K. BEHRENSMEYER
DAVID J. BOTTJER
SANDRA J. CARLSON
WILLIAM A. CLEMENS JR.
AUREAL T. CROSS
PAULO CUSTODI
WILLIAM A. DiMichele
JAMES O. FARLOW
ROBERT M. FINKS
KARL W. FLESSA
MICHAEL J. FOOTE
R. EWAN FORDYCE
ROBERT A. GASTALDO
IN MEMORY OF STEPHEN J. GOULD
LEE M. GRAY
JOHN C. HANDLEY
CAROLE S. HICKMAN
JOHN R. HORNER
FREDERICK H. C. HOTCHKISS
AUGUST ILG
NINA JABLONSKI
JEREMY B. C. JACKSON
CHARLES KING
MICHAL KOWALEWSKI
MICHAEL LABARBERA
WANN LANGSTON JR.
DAVID R. LINDBERG
JERE H. LIPPS
ERNEST L. LUNDELius JR.
BRUCE J. MACFADDEN
HARUYOSHI MAEDA
NOBUO MAJIMA
GEORGE R. McGHEE JR.
FRANK K. MCKINNEY
DAVID L. MEYER
ARNOLD I. MILLER
WILLIAM C. MILLER III
KEVIN PADIAN
MARK E. PATZKOWSKY
JARED P. PRICE
FREDERICK J. PUGLIESE
BRUCE RUNNEGAR
LOU ELLA R. SAUL
W. BRUCE SAUNDERS
IN MEMORY OF TOM SCHOPF
ELIZABETH CALDWELL SEASTRU姆
CONSTANCE M. SOJA
MARGARET S. STEVENS
JACEK K. SULANOWSKI
SHERMAN SUTER
JOHN M. TATE
ROGER D. K. THOMAS
BRUCE H. TIFFNEY
JAMES W. VALENTINE
SALLY E. WALKER
RON F. WASZCZAK
JOHNNY A. WATERS
PETER WILF