

# African Paleoecology and Human Evolution

---

Humans evolved in the dynamic landscapes of Africa under conditions of pronounced climatic, geological, and environmental change during the past 7 million years. This book brings together detailed records of the paleontological and archeological sites in Africa that provide the basic evidence for understanding the environments in which we evolved. Chapters cover specific sites, with comprehensive accounts of their geology, paleontology, paleobotany, and their ecological significance for our evolution. Other chapters provide important regional syntheses of past ecological conditions. This book is unique in merging a broad geographic scope (all of Africa) and deep time framework (the past 7 million years) in discussing the geological context and paleontological records of our evolution and that of organisms that evolved alongside our ancestors. It will offer important insights to anyone interested in human evolution, including researchers and graduate students in paleontology, archeology, anthropology, and geology.

**Sally C. Reynolds** is Principal Academic in Hominin Palaeoecology and Head of the Institute for Studies of Landscape and Human Evolution at Bournemouth University, UK. She has over 20 years of research experience in the study of African mammalian fauna, past environments, and landscapes. She previously co-edited *African Genesis: Perspectives on Hominin Evolution* (Cambridge University Press, 2012).

**René Bobe** is Head Paleontologist with the Paleo-Primate Project at Gorongosa National Park, Sofala, Mozambique, and a Research Affiliate at the Primate Models for Behavioural Evolution Laboratory, School of Anthropology, University of Oxford, UK. He has been studying early hominin paleoecology in eastern Africa for the past 30 years, with fieldwork in Ethiopia, Kenya, and Mozambique. His research focuses on fossil mammals that provide long-term records of ecological change.

Cambridge University Press & Assessment  
978-1-107-07403-3 — African Paleoecology and Human Evolution  
Edited by Sally C. Reynolds , René Bobe  
Frontmatter  
[More Information](#)

# African Paleoecology and Human Evolution

Edited by  
**Sally C. Reynolds**  
Bournemouth University  
**René Bobe**  
University of Oxford



CAMBRIDGE  
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom  
One Liberty Plaza, 20th Floor, New York, NY 10006, USA  
477 Williamstown Road, Port Melbourne, VIC 3207, Australia  
314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India  
103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of the University of Cambridge.  
It furthers the University’s mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

[www.cambridge.org](http://www.cambridge.org)  
Information on this title: [www.cambridge.org/9781107074033](http://www.cambridge.org/9781107074033)  
DOI: 10.1017/9781139696470

© Cambridge University Press 2022

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2022

Printed in the United Kingdom by TJ Books Limited, Padstow Cornwall  
*A catalogue record for this publication is available from the British Library.*

*Library of Congress Cataloging-in-Publication Data*  
Names: Reynolds, Sally C., editor. | Bobe, René, 1960- editor.  
Title: African paleoecology and human evolution / edited by Sally C. Reynolds, Bournemouth University, René Bobe, University of Oxford.  
Description: Cambridge, United Kingdom ; New York, NY : Cambridge University Press, 2022. | Includes index.  
Identifiers: LCCN 2021050165 (print) | LCCN 2021050166 (ebook) | ISBN 9781107074033 (hardback) | ISBN 9781139696470 (ebook)  
Subjects: LCSH: Evolutionary paleoecology. | Human evolution — Africa. | BISAC: SOCIAL SCIENCE / Anthropology / Physical  
Classification: LCC QE721.2.E87 A37 2022 (print) | LCC QE721.2.E87 (ebook) | DDC 560/.45096—dc23/eng/20211216  
LC record available at <https://lcn.loc.gov/2021050165>  
LC ebook record available at <https://lcn.loc.gov/2021050166>

ISBN 978-1-107-07403-3 Hardback

Additional resources for this publication at [www.cambridge.org/africanpaleoecology](http://www.cambridge.org/africanpaleoecology).

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

We dedicate this volume to generations of fieldworkers and researchers who, by virtue of their tireless efforts under African skies, have revealed the evidence with which to understand our origins.

Cambridge University Press & Assessment  
978-1-107-07403-3 — African Paleoecology and Human Evolution  
Edited by Sally C. Reynolds , René Bobe  
Frontmatter  
[More Information](#)

Contents

*List of Contributors* ix  
*Acknowledgments* xiii

Part I Modern Africa and Overview of Late Cenozoic Paleoenvironments

1 **Introduction: African Paleoecology and Human Evolution** 1  
René Bobe and Sally C. Reynolds

2 **Approaches to the Study of Past Environments** 7  
Peter Andrews, Sally C. Reynolds, and René Bobe

3 **Environmental and Stratigraphic Bias in the Hominin Fossil Record: Implications for Theories of the Climatic Forcing of Human Evolution** 15  
Philip J. Hopley and Simon J. Maxwell

4 **Late Miocene and Earliest Pliocene Paleoecology of Africa: A Synthesis** 24  
Jessamy H. Doman and Emily Goble Early

5 **The Middle Pleistocene Through the Holocene of Africa: A Synthesis** 33  
J. Tyler Faith

Part II Southern Africa

6 **The Southern African Sites: Paleoenvironmental Syntheses and Future Research Prospects** 49  
Sally C. Reynolds

7 **Geology, Fauna, and Paleoenvironmental Reconstructions of the Makapansgat Limeworks *Australopithecus africanus*-Bearing Paleo-Cave** 66  
Kaye E. Reed, Kevin L. Kuykendall, Andy I.R. Herries, Philip J. Hopley, Matt Sponheimer, and Lars Werdelin

8 **Paleoenvironments and the Context of Plio-Pleistocene Hominins at Kromdraai, South Africa** 82  
Jean-Baptiste Fourvel and J. Francis Thackeray

9 **Using the Faunal Community to Determine the Local Ecology for Early Hominins at Cooper’s Cave at 1.5 Ma** 86  
Darryl de Ruiter

10 **The Paleoenvironments of Sterkfontein: Old Questions, New Approaches** 92  
Lauren C. Sewell, Job M. Kibii, and Sally C. Reynolds

11 **Swartkrans: A Record of Paleoenvironmental Change in the Cradle of Humankind** 102  
Darryl de Ruiter

12 **Cornelia-Uitzoek: Paleoecology, Archeology and Geochronology** 120  
James S. Brink†, John A.J. Gowlett, Andy I.R. Herries, John Hancox, Jacopo Moggi-Cecchi, Daryl Codron, Lloyd Rossouw, Gary Trower, Olivia M.L. Stone, Britt Bousman, Rainer Grün, and Antoine Souron

13 **The Paleoecology of the *Australopithecus africanus* Type Site at Taung, South Africa** 135  
Philip J. Hopley and Brian F. Kuhn

14 **Wonderwerk Cave, Northern Cape Province: An Early–Middle Pleistocene Paleoenvironmental Sequence for the Interior of South Africa** 142  
Liora Kolska Horwitz, Margaret D. Avery, Marion K. Bamford, Francesco Berna, James S. Brink†, Michaela Ecker, Yolanda Fernandez-Jalvo, Paul Goldberg, Sharon Holt, Julia Lee-Thorp, Ari Matmon, Robyn Pickering, Naomi Porat, Lloyd Rossouw, Louis Scott, Ron Shaar, and Michael Chazan

Part III Eastern and Central Africa

15 **Hominid Paleoenvironments in Tropical Africa from the Late Miocene to the Early Pleistocene** 161  
René Bobe and Sally C. Reynolds

16 **Mammal Paleoecology from the Late Early Pleistocene Sites of the Dandiero Basin (Eritrea), With Emphasis on the Suid Record** 187  
Tsegai Medin, Bienvenido Martínez-Navarro, Marco P. Ferretti, Massimiliano Ghinassi, Mauro Papini, Yosief Libsekal, and Lorenzo Rook

17 **The 6-Million-Year Record of Ecological and Environmental Change at Gona, Afar Region, Ethiopia** 197  
Naomi E. Levin, Scott W. Simpson, Jay Quade, Melanie A. Everett, Stephen R. Frost, Michael J. Rogers, and Sileshi Semaw

- 18 **The Hadar Formation, Afar Regional State, Ethiopia: Geology, Fauna, and Paleoenvironmental Reconstructions** 214  
Christopher J. Campisano, John Rowan, and Kaye E. Reed
- 19 **Fossil Vertebrates and Paleoenvironments of the Pliocene Hadar Formation at Dikika, Ethiopia** 229  
René Bobe, Denis Geraads, Jonathan G. Wynn, Denné Reed, W. Andrew Barr, and Zeresenay Alemseged
- 20 **Miocene to Pliocene Stratigraphy and Paleoeology of Galili, Ethiopia** 242  
Ottmar Kullmer, Oliver Sandrock, Thomas Bence Viola, Wolfgang Hujer, Zelalem Bedaso, Doris Nagel, Andrea Stadlmayr, Fritz Popp, Robert Scholger, Gerhard W. Weber, and Horst Seidler
- 21 **Melka Kunture, Ethiopia: Early Pleistocene Faunas of the Ethiopian Highlands** 256  
Denis Geraads, Rosalia Gallotti, Jean-Paul Raynal, Raymonde Bonnefille, and Margherita Mussi
- 22 **Early Pleistocene Fauna and Paleoenvironments at Konso, Ethiopia** 269  
Gen Suwa, Berhane Asfaw, Hideo Nakaya, Shigehiro Katoh, and Yonas Beyene
- 23 **Paleontology and Geology of the Mursi Formation** 278  
Michelle S.M. Drapeau, Jonathan G. Wynn, Denis Geraads, Laurence Dumouchel, Christopher J. Campisano, and René Bobe
- 24 **Mammalian Diversity Patterns and Paleoeology in the Lower Omo Valley, Ethiopia** 289  
Enquye W. Negash, René Bobe, Zeresenay Alemseged, and Jonathan Wynn
- 25 **Paleoeology and Paleoenvironments of Early Quaternary Faunal Assemblages from the Nachukui Formation in Kenya: Insights from the West Turkana Archeological Project** 298  
Jean-Philip Brugal and Hélène Roche
- 26 **Early Hominins and Paleoeology of the Koobi Fora Formation, Lake Turkana Basin, Kenya** 311  
René Bobe, João d'Oliveira Coelho, Susana Carvalho, and Meave Leakey
- 27 **Early Pliocene Faunal Assemblages from the Tugen Hills, Kenya: A Comparison of Field Collection Methods and Some Implications for Paleoenvironmental Reconstruction** 332  
Katie M. Binetti, Andrew Hill†, and Joseph V. Ferarro
- 28 **The Southern Chemeron Formation, Tugen Hills, Kenya: A Review and a Paleoeological Analysis of the Bovid Fauna** 343  
Emily Goble Early
- 29 **Fauna and Paleoenvironments of the Homa Peninsula, Western Kenya** 360  
Laura C. Bishop, Thomas W. Plummer, David R. Braun, Peter W. Ditchfield, Emily Goble Early, Fritz Hertel, Cristina Lemorini, James S. Oliver, Richard Potts, Thomas Vincent, Elizabeth Whitfield, and Rahab N. Kinyanjui
- 30 **Mammalian Fauna of the Olorgesailie Basin and Southern Kenya Rift** 376  
Richard Potts and J. Tyler Faith
- 31 **Context and Environments of the Lower Pleistocene Hominins of Peninj, Tanzania** 384  
Denis Geraads, Ignacio de la Torre, and Christiane Denys
- 32 **Paleoeology and Vertebrate Taphonomy of DK Site (Bed I), Olduvai Gorge, Tanzania** 394  
Paul Farrugia and Jackson K. Njau
- 33 **Lower Bed II Olduvai Basin, Tanzania: Wetland Sedge Taphonomy, Seasonal Pasture, and Implications for Hominin Scavenging** 413  
Charles R. Peters, Marion K. Bamford, and John P. Shields
- 34 **Paleoeology of Laetoli, Tanzania** 435  
Terry Harrison, Amandus Kwekason, and Denise F. Su
- 35 **The Paleoenvironment of the Plio-Pleistocene Chiwondo Beds of Northern Malawi** 453  
Ottmar Kullmer, Oliver Sandrock, Harrison Simfukwe, Timothy G. Bromage, and Friedemann Schrenk

## Part IV Northern Africa

- 36 **The Northern African Sites: Paleoenvironmental Syntheses** 461  
Denis Geraads
- 37 **Ahl al Oughlam, Morocco: The Richest Fossil Site in North Africa at the Pliocene/Pleistocene Boundary** 468  
Denis Geraads, David Lefèvre, and Jean-Paul Raynal
- 38 **Tighennif (Ternifine), Algeria: Environments of the Earliest Human Fossils of North Africa in the late Early Pleistocene** 475  
Denis Geraads
- 39 **Early *Homo* on the Atlantic Shore: The Thomas I and Oulad Hamida 1 Quarries, Morocco** 481  
Denis Geraads, Camille Daujeard, David Lefèvre, Rosalia Gallotti, Abderrahim Mohib, and Jean-Paul Raynal

---

*Volume References* 492  
*Index* 576  
*Color plates can be found between pages 306 and 307*



# Contributors

- Zeresenay Alemseged**  
Department of Organismal Biology and Anatomy, University of Chicago
- Peter Andrews**  
Natural History Museum, London
- Berhane Asfaw**  
Rift Valley Research Service
- Margaret A. Avery**  
Iziko Museums of South Africa
- Marion K. Bamford**  
Evolutionary Studies Institute, University of the Witwatersrand
- W. Andrew Barr**  
George Washington University
- Zelalem Bedaso**  
College of Arts and Sciences: Geology, University of Dayton
- Francesco Berna**  
Department of Archaeology, Simon Fraser University
- Yonas Beyene**  
Association for Research and Conservation of Culture
- Katie M. Binetti**  
Department of Anthropology, Baylor University
- Laura C. Bishop**  
Research Centre in Evolutionary Anthropology and Palaeoecology, School of Biological and Environmental Sciences Liverpool John Moores University and The Sino-British College, University of Shanghai for Science and Technology
- René Bobe**  
School of Anthropology, University of Oxford; Gorongosa National Park, Sofala, Mozambique; Interdisciplinary Center for Archaeology and Evolution of Human Behavior (ICArEHB), Universidade do Algarve
- Raymonde Bonnefille**  
CNRS, CEREGE UMR Europole Méditerranéen de l'Arbois Aix-en-Provence
- Britt Bousman**  
Center for Archaeological Studies, Department of Anthropology, Texas State University

- David R. Braun**  
Center for the Advanced Study of Human Paleobiology, Department of Anthropology, The George Washington University
- James S. Brink†**  
Florisbad Research Station, National Museum, Bloemfontein
- Timothy G. Bromage**  
Department of Molecular Pathobiology, New York University College of Dentistry
- Jean-Philip Brugal**  
LAMPEA (UMR 7269) MMSH BP 647
- Christopher J. Campisano**  
Institute of Human Origins, School of Human Evolution and Social Change, Arizona State University
- Susana Carvalho**  
Primate Models for Behavioural Evolution Laboratory, School of Anthropology, University of Oxford
- Michael Chazan**  
Anthropology Department, University of Toronto
- Daryl Codron**  
Department of Zoology & Entomology, University of the Free State
- Camille Daujeard**  
Département de Préhistoire, UMR 7194 du CNRS, Muséum National d'Histoire Naturelle
- Ignacio de la Torre**  
Instituto de Historia, CSIC
- Darryl de Ruiter**  
Department of Anthropology, Texas A&M University
- Christiane Denys**  
Muséum National d'Histoire Naturelle
- Peter W. Ditchfield**  
Research Laboratory for Archaeology and the History of Art, University of Oxford
- João d'Oliveira Coelho**  
Primate Models for Behavioural Evolution Laboratory, School of Anthropology, University of Oxford

List of Contributors

**Jessamy H. Doman**  
Department of Anthropology, Yale University

**Michelle S.M. Drapeau**  
Département d'Antropologie, Université de Montréal

**Laurence Dumouchel**  
Department of Anthropology, Wichita State University

**Michaela Ecker**  
Anthropology Department, University of Toronto

**Melanie A. Everett**  
Chevron Energy Technology Co., Houston

**J. Tyler Faith**  
Natural History Museum of Utah & Department of Anthropology, University of Utah

**Paul Farrugia**  
Indiana University, Department of Earth and Atmospheric Sciences

**Joseph V. Ferarro**  
Department of Anthropology, Baylor University

**Yolanda Fernandez-Jalvo**  
Departamento de Palaeobiología, Museo de Nacional de Ciencias Naturales

**Marco P. Ferretti**  
Scuola di Scienze e Tecnologia (Sezione di Geologia), Università degli Studi di Camerino, Camerino

**Jean-Baptiste Fourvel**  
Laboratoire TRACES UMR 5608 Université Toulouse Jean Jaurès Maison de la Recherche

**Stephen R. Frost**  
Department of Anthropology, University of Oregon

**Rosalia Gallotti**  
Université Paul-Valéry Montpellier 3, Archéologie des sociétés méditerranéennes - LabEx Archimède, Montpellier

**Denis Geraads**  
CR2P, Muséum National d'Histoire Naturelle, CNRS, Sorbonne Université

**Massimiliano Ghinassi**  
Dipartimento di Geoscienze, Università degli Studi di Padova, Padova

**Emily Goble Early**  
Anthropology Section, Arizona Museum of Natural History

**Paul Goldberg**  
Archeology Department, Boston University

**John A.J. Gowlett**  
Department of Archaeology, Classics and Egyptology, University of Liverpool

**Rainer Grün**  
Research School of Earth Sciences, The Australian National University

**John Hancox**  
CCIC Coal (Pty) Limited, South Africa

**Terry Harrison**  
Department of Anthropology, New York University

**Andy I.R. Herries**  
Department of Archaeology, and History La Trobe University

**Fritz Hertel**  
Biology, California State University, Northridge

**Andrew Hill†**  
Department of Anthropology, Yale University

**Sharon Holt**  
Florisbad Quaternary Research Department, National Museum, Bloemfontein

**Philip J. Hopley**  
Department of Earth and Planetary Sciences, Birkbeck, University of London

**Liora Kolska Horwitz**  
National Natural History Collections, Faculty of Life Sciences, The Hebrew University

**Wolfgang Hujer**  
OMV Exploration & Production GmbH

**Shigehiro Katoh**  
Division of Natural History, Hyogo Museum of Nature and Human Activities, Sanda

**Job M. Kibii**  
Division of Palaeontology, National Museums of Kenya

**Rahab N. Kinyanjui**  
Palynology & Paleobotany section, Earth Sciences Department, National Museums of Kenya

**Brian F. Kuhn**  
Department of Geology, University of Johannesburg

**Ottmar Kullmer**  
Division of Paleoanthropology, Research Institute and Natural History Museum Frankfurt

**Kevin L. Kuykendall**  
Department of Archaeology, University of Sheffield

**Amandus Kwekason**  
Museum and House of Culture, National Museum of Tanzania

**Meave Leakey**  
Turkana Basin Institute, Stony Brook University, USA

**Julia Lee-Thorp**  
Research Laboratory for Archaeology, University of Oxford

- David Lefèvre**  
Université Paul-Valéry Montpellier 3, Archéologie des sociétés méditerranéennes - LabEx Archimède, Montpellier
- Cristina Lemorini**  
Dipartimento di Scienze dell'Antichità, Università di Roma La Sapienza
- Naomi E. Levin**  
Department of Earth & Environmental Sciences, University of Michigan
- Yosief Libsekal**  
National Museum of Eritrea
- Bienvenido Martínez-Navarro**  
ICREA, IPHES-CERCA, URV, Insitut Català de Paleoecologia Humana i Evolució Social, Tarragona
- Ari Matmon**  
Institute of Earth Sciences, The Hebrew University
- Simon J. Maxwell**  
Department of Earth and Planetary Sciences, Birkbeck, University of London
- Tsegai Medin**  
IPHES-CERCA, Institut Català de Paleoecologia Humana i Evolució Social, Tarragona Commission of Culture and Sports of Eritrea
- Jacopo Moggi-Cecchi**  
Laboratori di Antropologia, Dipartimento di Biologia, Università di Firenze
- Abderrahim Mohib**  
Moroccan Ministry of Culture
- Margherita Mussi**  
Università di Roma Sapienza, Dipartimento di Scienze dell'Antichità
- Doris Nagel**  
Department of Paleontology, University of Vienna
- Hideo Nakaya**  
Department of Earth and Environmental Sciences, Kagoshima University
- Enquye W. Negash**  
Center for the Advanced Study of Human Paleobiology, George Washington University
- Jackson K. Njau**  
Indiana University, Department of Earth and Atmospheric Sciences
- James S. Oliver**  
Anthropology Section, Research and Collections Center, Illinois State Museum

- Mauro Papini**  
Dipartimento di Scienze della Terra, Università degli Studi di Firenze, Firenze
- Charles R. Peters**  
Department of Anthropology, University of Georgia
- Robyn Pickering**  
Department of Geological Sciences, University of Cape Town
- Thomas W. Plummer**  
Department of Anthropology, Queen's College, City University of New York and NYCEP
- Fritz Popp**  
Department for Geodynamics and Sedimentology, University of Vienna
- Naomi Porat**  
Geological Survey of Israel
- Richard Potts**  
Human Origins Program, National Museum of Natural History, Smithsonian Institution and Department of Earth Sciences, National Museums of Kenya
- Jay Quade**  
Department of Geosciences, University of Arizona
- Jean-Paul Raynal**  
PACEA, CNRS, Université de Bordeaux, and INSAP, Rabat
- Denné Reed**  
Department of Anthropology, University of Texas at Austin
- Kaye E. Reed**  
Institute of Human Origins and School of Human Evolution and Social Change, Arizona State University
- Sally C. Reynolds**  
Faculty of Science and Technology, Bournemouth University,
- Hélène Roche**  
CNRS, Paris-Nanterre University
- Michael J. Rogers**  
Department of Anthropology, Southern Connecticut State University
- Lorenzo Rook**  
Dipartimento di Scienze della Terra, Paleo[Fab]Lab, Università degli Studi di Firenze
- Lloyd Rossouw**  
Florisbad Quaternary Research Department, National Museum, Bloemfontein & Department of Plant Sciences, University of the Free State, Bloemfontein
- John Rowan**  
Department of Anthropology, University of Albany, SUNY

List of Contributors

**Oliver Sandrock**  
Department of Earth- and Life History, Hesse State Museum  
Darmstadt

**Robert Scholger**  
Lehrstuhl für Angewandte Geophysik, Montanuniversität  
Loeben

**Friedemann Schrenk**  
Division of Paleoanthropology, Senckenberg Research Institute  
and Natural History Museum Frankfurt

**Louis Scott**  
Department of Plant Sciences, University of the Free State

**Horst Seidler**  
Department of Evolutionary Anthropology, University of  
Vienna

**Sileshi Semaw**  
Centro Nacional de Investigación sobre la Evolución Humana

**Lauren C. Sewell**  
Faculty of Science and Technology, Bournemouth University

**Ron Shaar**  
Institute of Earth Sciences, The Hebrew University

**John P. Shields**  
Georgia Electron Microscopy, University of Georgia

**Harrison Simfukwe**  
Cultural & Museum Centre Karonga, Malawi

**Scott W. Simpson**  
Department of Anatomy, Case Western Reserve University  
School of Medicine

**Antoine Souron**  
PACEA, UMR CNRS 5199, Université de Bordeaux

**Matt Sponheimer**  
Department of Anthropology, University of Colorado,  
Boulder

**Andrea Stadlmayr**  
Department of Evolutionary Anthropology, University of Vienna

**Olivia M.L. Stone**  
School of Biological, Earth and Environmental Sciences,  
University of New South Wales

**Denise F. Su**  
Institute of Human Origins, School of Human Evolution and  
Social Change, Arizona State University

**Gen Suwa**  
Department of Biological Sciences, University of Tokyo

**J. Francis Thackeray**  
Evolutionary Studies Institute, University of the Witwatersrand

**Gary Trower**  
Evolutionary Studies Institute, University of the Witwatersrand

**Thomas Vincent**  
Research Centre in Evolutionary Anthropology and  
Palaeoecology, School of Biological and Environmental  
Sciences, Liverpool John Moores University

**Thomas Bence Viola**  
Department of Anthropology, University of Toronto

**Gerhard W. Weber**  
Department of Evolutionary Anthropology, University of  
Vienna

**Lars Werdelin**  
Department of Palaeobiology, Swedish Museum of Natural  
History

**Elizabeth Whitfield**  
Research Centre in Evolutionary Anthropology and  
Palaeoecology, School of Biological and Environmental  
Sciences Liverpool John Moores University

**Jonathan G. Wynn**  
Division of Earth Sciences, National Science Foundation

# Acknowledgments

This book has been a communal effort and we could not have achieved this without the assistance of a multitude of generous colleagues. The task of synthesizing large parts of the fossil record of an entire continent was a considerable challenge, one which would never have been possible without the support and patience of over 120 contributing authors.

Firstly, we would like to thank all our colleagues who have contributed to this volume as authors or co-authors. All chapters were peer-reviewed and we are very grateful to our many colleagues who kindly offered their time and expertise in the review process: Jordi Agusti, Peter Andrews, Margaret Avery, Andrew Barr, Anna K. Behrensmeyer, Miriam Belmaker, Matthew Bennett, Faysal Bibi, Scott Blumenthal, the late James Brink, Jean-Philip Brugal, João Coelho, Lucile Crêtè; Andrew Du, Laurence Dumouchel, Tyler Faith, Joe Ferraro, Denis Geraads, John Harris, Terry Harrison, Phil Hopley, Liora Horwitz, Kris Kovarovic, Carles Martín-Closas, Bienvenido

Martínez-Navarro, Jackson Njau, David Patterson, Martin Pickford, Tom Plummer, Amy Rector, Darryl de Ruiter, Denné Reed, Kaye Reed, Oliver Sandrock, Lauren Sewell, Gen Suwa, Amelia Villaseñor, and Tim White.

Secondly, we would like to thank the staff at Cambridge University Press, especially Jenny van der Meijden for her expert help during the production process. Bruno Matos created the regional and continental maps that are a key part of this volume. Matthew Bennett modified the figure for the African biome map.

Finally, we would like to give heartfelt thanks to our families for their support and patience while we produced this book.

Sally C. Reynolds  
*Poole*

René Bobe  
*Oxford*

Cambridge University Press & Assessment  
978-1-107-07403-3 — African Paleoecology and Human Evolution  
Edited by Sally C. Reynolds , René Bobe  
Frontmatter  
[More Information](#)