

### **A Fossil History of Southern African Land Mammals**

There is an ever-growing wealth of mammalian fossil material being collected from palaeontological and archaeological sites in southern Africa. This reference provides comprehensive information on the taxonomy and distribution in time and space of all currently recognised southern African fossil mammals. After an introductory background chapter on southern Africa, mammals, sites and dating, the following chapters are presented by epoch, covering the Eocene, Miocene, Pliocene, Pleistocene and Holocene. Individual maps provide information on where in the landscape specific taxa have been found, and a comprehensive index lists all the fauna and site locations. It ends with a chapter on how the book can be used, and lines of future research. Collecting a vast amount of information together in an accessible format, this is an essential reference for non-specialist taxonomists and palaeontologists, as well as for those using fossil data for other applications, such as archaeology, neontology and nature conservation. This title is also available as Open Access on Cambridge Core.

**D. Margaret Avery** is Emeritus Associate of Cenozoic Studies at Iziko Museums of South Africa, and Honorary Researcher at the Evolutionary Studies Institute at the University of Witwatersrand. Her research interests include understanding the background of human evolution, as well as modern micromammals. She was the President of the International Union for Quaternary Research (INQUA) between 2011 and 2015, and is a Fellow of the Royal Society of South Africa.

Cambridge University Press  
978-1-108-48088-8 – A Fossil History of Southern African Land Mammals  
D. Margaret Avery  
Frontmatter  
[More Information](#)

---

# A Fossil History of Southern African Land Mammals

D. MARGARET AVERY  
*Iziko Museums of South Africa*



**CAMBRIDGE**  
UNIVERSITY PRESS

## 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

79 Anson Road, #06–04/06, Singapore 079906

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/9781108480888](http://www.cambridge.org/9781108480888)

DOI: 10.1017/9781108647243

© D. Margaret Avery 2019

This work is in copyright. It is subject to statutory exceptions and to the provisions of relevant licensing agreements; with the exception of the Creative Commons version the link for which is provided below, no reproduction of any part of this work may take place without the written permission of Cambridge University Press.

An online version of this work is published at [doi.org/10.1017/9781108647243](https://doi.org/10.1017/9781108647243) under a Creative Commons Open Access licence CC-BY-NC-ND 4.0 which permits re-use, distribution and reproduction in any medium for non-commercial purposes providing appropriate credit to the original work is given. You may not distribute derivative works without permission. To view a copy of this licence, visit <https://creativecommons.org/licenses/by-nc-nd/4.0>

All versions of this work may contain content reproduced under license from third parties.

Permission to reproduce this third-party content must be obtained from these third-parties directly.

When citing this work, please include a reference to the DOI 10.1017/9781108647243

First published 2019

*A catalogue record for this publication is available from the British Library.*

*Library of Congress Cataloging-in-Publication Data*

Names: Avery, D. Margaret, author.

Title: A fossil history of southern African land mammals / D. Margaret Avery, Iziko Museums of South Africa.

Description: Cambridge, United Kingdom ; New York, NY : Cambridge University Press, [2019] | Includes bibliographical references and index.

Identifiers: LCCN 2018045348 | ISBN 9781108480888 (hardback)

Subjects: LCSH: Mammals, Fossil–Africa, Southern.

Classification: LCC QE881 .A94 2019 | DDC 569.0968–dc23

LC record available at <https://lccn.loc.gov/2018045348>

ISBN 978-1-108-48088-8 Hardback

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.

*To all those whose hard work made this book necessary,  
and in memory of my friend,  
H. Basil S. Cooke*

Cambridge University Press  
978-1-108-48088-8 – A Fossil History of Southern African Land Mammals  
D. Margaret Avery  
Frontmatter  
[More Information](#)

---

# Contents

Acknowledgements	page viii
<b>1. Background</b>	1
1.1 History and Rationale	1
1.2 Southern Africa	2
1.3 Mammals	2
1.4 Sites	4
1.5 Mapping	4
1.6 Dating	4
<b>2. The Eocene</b>	6
2.1 Eocene Mammals	6
2.2 Eocene Sites	11
<b>3. The Miocene</b>	12
3.1 Miocene Mammals	12
3.2 Miocene Sites	35
<b>4. The Pliocene</b>	39
4.1 Pliocene Mammals	39
4.2 Pliocene Sites	68
<b>5. The Pleistocene</b>	71
5.1 Pleistocene Mammals	71
5.2 Pleistocene Sites	122
<b>6. The Holocene</b>	145
6.1 Holocene Mammals	145
6.2 Holocene Sites	183
<b>7. Present and Future</b>	219
7.1 The Current Situation	219
7.2 The Way Forward	222
References	223
Index	295

## Acknowledgements

Thanks go to the authors and librarians who responded to requests for reprints and information, especially Martin Pickford, Sorbonne Universités, who answered numerous queries. Tribute must also be paid to various indispensable online archives, particularly the Biodiversity Heritage Library ([www.biodiversitylibrary.org](http://www.biodiversitylibrary.org)) and Gallica (<http://gallica.bnf.fr>). The University of Edinburgh provided access to JSTOR through its Alumni Access Program. Richard G. Klein, Stanford University, kindly reviewed an early draft and drew my attention to several important references. Andries van Aarde, AOSIS, made excellent suggestions for improving the text. Open Access publication was made possible through grants from the University of the Witwatersrand Centre of Excellence for Palaeosciences and the Palaeontological Scientific Trust (PAST), both in Johannesburg.