## **Edited by**

Ross K. Dowling, Edith Cowan University, Australia

**David Newsome, Murdoch University, Australia** 





British Library Cataloguing in Publication Data: a catalogue record for this title is available from the British Library.

Library of Congress Catalog Card Number: on file.

ISBN: 978-1-906884-17-8

Copyright © Goodfellow Publishers 2010

All rights reserved. The text of this publication, or any part thereof, may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, storage in an information retrieval system, or otherwise, without prior permission of the publisher or under licence from the Copyright Licensing Agency Limited. Further details of such licences (for reprographic reproduction) may be obtained from the Copyright Licensing Agency Limited, of Saffron House, 6–10 Kirby Street, London EC1N 8TS.



Design and typesetting by P.K. McBride

Printed by Lightning Source, www.lightningsource.com

#### Cover photo credits

Top: Tourists visiting Purnululu National Park, Western Australia to view the Bungle Bungle Ranges. The Bungle Bungles are one of Australia's iconic geological tourism attractions and despite their extremely remote location in the vast Kimberley Region of Western Australia, they are visited by over 26,000 visitors per year. The ranges comprise Devonian-age quartz sandstone eroded over a period of 20 million years into a series of beehive-shaped towers or cones. These outstanding examples of cone karst owe their existence and uniqueness to several interacting geological, biological, erosional and climatic phenomena. For these values the park was inscribed on the World Heritage List in 2003.

Source: Ross Dowling

Bottom: Sea arch visible along the Red Point hiking trail in northeast Iceland. The trail comprises scenic values, arches, stacks, exposed sections of columnar jointed basalt and cliff viewing areas.

Source: David Newsome

## Contents

	Contributors	iv
	About the editors	ix
	Preface	xii
1	Geotourism: a Global Activity Ross Dowling and David Newsome	1
2	Australia's Geological Heritage Phil Creaser	18
3	Active Geothermal and Volcanic Environments as Tourist Destinations Patricia J Erfurt-Cooper	33
4	Caves and Karst Geotourism in Australia Jay Anderson	49
5	A Perspective on Rock Climbers, Scramblers and Hill Walkers John Watson	67
6	Geological Attractions for Tourists in Mauritius C. P. Johnson, H. C. Sheth and C. D. Ollier	80
7	Geotourism in the Sultanate of Oman Andrew Lawrence	93
8	Geotourism in Malaysia: Mount Kinabalu, Sabah Felix Tongkul	113
9	Geosite Identification as an Element of Promoting Geotourism in a Wildlife Hotspot I C. Schutte and I. Booysen	124
10	Geotourism and Geoparks in Brazil Jasmine Cardozo Moreira and João José Bigarella	137
11	<b>The Geology of Ireland</b> Patrick Maher	153
12	The Grand Canyon, USA Stephen Martin	167
13	Hong Kong Geopark Young C.Y. Ng, L.W. Fung and D. Newsome	179
14	Kanawinka, Australia Ian D. Lewis	192
15	Geotourism in Greece: Nickolas C. Zouros	215
16	Geotourism: Opportunity and Tourism Significance David Newsome and Ross Dowling	230
	Index	248

## **Contributors**

Jay Anderson has extensive involvement with cave and karst management and karst protection in Australia, and is the recent past President of the Australian Speleological Federation. She is the Chair of the IUCN-WCPA Caves and Karst Specialist Group (previously referred to as the Caves and Karst Taskforce of the World Commission on Protected Areas). Jay was a presenter on karst geotourism at the Inaugural Global Geotourism Conference/ held in Australia in 2008. Contact: mrsjayanderson@gmail.com

João José Bigarella is guest professor at the Federal University of Santa Catarina, Brazil. During his lifetime of teaching and research work he has carried out geological research in South Africa, Namibia, Angola, Algeria (Sahara), Argentina, Uruguay and Paraguay, about the paleocurrent and migration of the continents of South America and Africa. His academic research includes more than 200 articles in scientific journals in Brazil, United States, Canada, Germany, Holland, England, Russia and South Africa, and several books in the field of geosciences. He is a member of the Brazilian Academy of Sciences and the Academy of Sciences of America. Contact: irisbigarella@gmail.com

Ingrid Booysen is Senior Cartographer at the Unit for Geoinformation and Mapping in the Department of Geography, Geoinformatics and Meteorology, University of Pretoria, South Africa. She specializes in Geoinformation Systems (GIS) and cartography and has been involved in the Geology and Geosites Research Project of the Kruger National Park for the past five years. Her contribution to geology and identification of geosites in the Kruger National Park, South Africa mainly entails photography, GIS Mapping of the Geosites and creation of large format posters and panels for seven of the main camps in the Park. Contact: ingrid.booysen@up.ac.za

Phil Creaser has degrees in geology and an interest in geological heritage since the mid 1970s when working in the Commonwealth Environment Department in Australia. He was elected to the International Task Force on Earth Heritage Conservation following the Malvern Conference in 1993. He has worked with Professor Michael Archer and his palaeontological team at the University of New South Wales since 1985 and played a key role in the inscription of Riversleigh on the World Heritage List in 1994. He retired from the Public Service in 2006 which has allowed him more time to further his broad geological interests. Contact: philcreaser@grapevine.com.au

Patricia Erfurt-Cooper lectures in tourism resource management at Ritsumeikan Asia-Pacific University, Japan, and is completing her PhD through James Cook University, Australia. Her research interests include volcano and geothermal environments with a focus on risk management related to geotourism as well

as geothermal resources for human use. Her second book about tourism in geothermal and volcanic environments, co-edited with Malcolm Cooper, is currently in press with Earthscan. Contact: Patricia.Erfurt@jcu.edu.au

Anjana Ford is Education Coordinator, Jurassic Coast World Heritage Site, Dorchester, Engaland. She is an earth scientist specialising in communicating ideas about geology, geomorphology and processes that form natural landscapes to a wide range of audiences. After gaining a PhD in glacial geology at the University of Southampton she moved to the USA to continue a postdoctoral research career. During this time Anjana worked on a wide variety of research projects, but was most inspired by time spent working with the US National Park Service. Contact: A.K.Ford@dorsetcc.gov.uk

**Lok Wang Fung** is recently graduated from Murdoch University, Australia. He undertaking an honours project related to the Hong Kong Geopark interpretive practices under the supervision of Professor David Newsome at Murdoch University. Contact: alwfung2002@yahoo.com.hk

**C.P. Johnson** is Resident Director and Head of the Centre for Development of Advanced Computing (C-DAC), School of Advanced Computing, Mauritius. He also works with the C-DAC of the Ministry of Communications and Information Technology for the Government of India. He has previously worked as the Head of Remote Sensing and GIS Unit of Systems Research Institute in India. He holds an MSc in Applied Geology, MTech in geoexploration and PhD in earth sciences from the Indian Institute of Technology Bombay. Contact: johnson\_cp@yahoo.com

Andrew Lawrence is an advisor to the Ministry of Tourism, Sultanate of Oman. He is a karst management professional with over twenty years experience in conservation, tourism management, interpretation and product development. Following an extensive period managing karst conservation reserves of the Jenolan Caves Reserve Trust in New South Wales Australia, he is currently advising on the creation of nature based tourism experiences in the fast emerging tourism sector in Oman. Much of his work relates to the development of geotourism products and tools such as interpretive exhibits and cave infrastructure. Contact: andrew.lawrence@omantourism.gov.om

Ian Lewis was born on Mount Gambier's beautiful Blue Lake volcano surrounded by limestone caves and spectacular groundwater-filled sinkholes. He became a cave explorer, pioneer cave diver and is completing his PhD on the geology of the nearby World Heritage Naracoorte Fossil Caves. He moved eastwards as a teacher to the Portland area of basalt capes and undersea volcanoes. He has written several books on caves and the volcanic/limestone marine coastline, including shipwreck research. He chairs the Community Education Committee of the Kanawinka Geopark Executive, focusing on linking geo-trail frameworks to other related themes such as history, culture and wildlife. Contact: kanawinka1@ yahoo.com.au

Patrick Maher is Marketing and Geotourism Manager with CSA Global, is a worldwide geological consultancy with their head office in Perth, Western Australia. He has over 15 years experience working as a geologist and as a project leader for community geoheritage and geotourism groups in Ireland and Australia. He has worked with communities and local planning authorities in Ireland on landscape assessment and interpretation. Recently, he has been delivering lectures throughout Western Australia to promote the development of geotourism, mine heritage and geoheritage projects. He is also working on the development of geotourism trails with the National Trust of Australia (WA). Contact: patrick.maher@csaglobal.com

Stephen Martin is Superintendent of Grand Canyon National Park and World Heritage Area, Arizona, USA. He is a graduate of the University of Arizona in Natural Resources and is a 35 year employee with the US National Parks Service. He has worked in a broad range of field programs in visitor use, business management, and natural and cultural resource management programs. During his time with the USNP he has served as Superintendent at Gates of the Arctic and Denali National Parks in Alaska, as well as Grand Teton National Park in Wyoming. He was recently Deputy Director of the 391 National Parks in the United States, based in Washington DC. Contact: Steve\_P\_Martin@nps.gov

Jasmine Cardozo Moreira is a Professor of Tourism in Natural Areas, Ponta Grossa State University in Paraná, Brazil. She holds a degree in tourism, and has experience in tourism development and management plans of protected areas. She has considerable expertise in environmental education and her principal focus is environmental interpretation of geological heritage, for example the training courses she gave at the Iguassu Falls and Fernando de Noronha National Parks, the development of a Geotourism Field Guide for Noronha's Archipelago, and an Educational Plan for implementation in the Museum of Geology and Paleontology of Vila Velha. Contact: jasmine@uepg.br

Young Ng is the chairman of the Association for Geoconservation, Hong Kong, China, where he is involved in promoting geoconservation and geotourism. He is the founder of the Hong Kong Geopark and is a current member of the Hong Kong Geopark Taskforce. In addition he is a member of the Hong Kong Country and Marine Parks Board. He teaches geotourism courses in the University of Science and Technology, Australia as well as the Chinese University of Hong Kong. He pioneered geotourism in Hong Kong and is the course designer and an accredited geotourism instructor for registered tourist guides in the Skill Upgrading Scheme for the Hong Kong Government. Contact: young@rocks.org.hk Cliff Ollier is a geomorphologist, currently an Honorary Research Scientist at the University of Western Australia. Australia, He has formerly worked at the

the University of Western Australia, Australia. He has formerly worked at the universities of Bristol, Melbourne, Papua New Guinea, Canberra, New England, South Pacific and Australian National University. He has worked on the establishment of National Parks and World Heritage in Australia and Western Samoa, and has consulted on many aspects of parks and reserves. He has written

ten books, translated into Russian, Japanese, Italian and Polish, and over 300 scientific papers, visited about a hundred countries, and lectured at over 100 universities around the world. Contact: cliffol@cyllene.uwa.edu.au

Pascal Scherrer is a Research Fellow in Sustainable Tourism with the School of Natural Sciences at Edith Cowan University, Australia. With a background in environmental science and ecotourism, his main research interest is in sustainable tourism and visitor management in natural areas, addressing the areas of environmental and social impacts and their relationship. His research and publications span the areas of sustainable tourism, alpine ecology, visitor management and environmental and socio-cultural tourism impacts. He has a PhD in environmental science from Griffith University and a BSc with majors in environmental science and ecotourism. Contact: p.scherrer@ecu.edu.au

**Ignatius C. Schutte** previously worked as a geologist for the Geological Survey of South Africa. He has mapped the Kruger National Park for which he has published a geotourism guide. He also published articles for *Geobulletin* and overseas. He attended the: *First International Workshop on Geoparks and Geotourism* (2006), Germany, and 3<sup>rd</sup> *International UNESCO Conference on Geoparks* (2008), Germany, and two Geotourism Conferences in South Africa (2007, 2009). He holds the degrees MSc (geology) and MCom (marketing management) from Pretoria University and PhD (tourism management) from North-West University. Contact: ignsch@lantic.net

Hetu Sheth is in the Department of Earth Sciences, Indian Institute of Technology Bombay, India. There he is involved in the teaching and research of volcanology, igneous petrology and geochemistry and has additional research interests in volcanic and tectonic geomorphology and geotourism. He is particularly interested in flood basalt provinces, rifted continental margins, and ocean islands. He has been an editor of the *Journal of Earth System Science* and deputy website manager of www.mantleplumes.org. Contact: hcsheth@iitb.ac.in

Felix Tongkul is Professor of Geology and Head of the Natural Disaster Research Unit in the School of Science and Technology, Universiti Malaysia Sabah, East Malaysia. He is also currently the Director of Research and Innovation at UMS. For the past 25 years he has been carrying out research on the geological evolution of Northwest Borneo and since 1996 he has been involved in research related to the promotion of geological and landscape heritage for geotourism in Sabah. He is a pioneer member of the newly established Malaysian Geological Heritage Group. Contact: ftongkul@ums.edu.my

John Watson was a Western Australian protected area regional manager for 29 years and is now a policy officer. He contributes to the IUCN World Commission on Protected Areas Mountains Biome network, particularly as a champion for low altitude bio-diverse mountains. He established the Commission's Caves and Karst Specialist Group in 1992 and edited the IUCN *Guidelines for Cave and Karst Protection 1997*. He is a former rock climber and caver, and an active mountain and long distance walker. He designed a major section of Western Australia's

960km Bibbulmun Track and established many other coastal and mountain walks in South West Australia. Contact: jbwatson@iinet.net.au

**Nickolas Zouros** is Associate Professor in Physical Geography, University of the Aegean, Greece. He has been the Director of the Natural History Museum of the Lesvos Petrified Forest since its foundation in 1995. He was one of the founders of the European Geoparks Network in 2000 and is member of the UNESCO Global Geoparks Bureau. He was co-convenor of several Geopark Conferences and in the Geoparks and Geotourism Symposiun of the IGC, Oslo 2008. He is author of several articles and books on geoparks, geoconservation and geotourism and is co–editor of a book on *European Geoparks*. Contact: nzour@aegean.gr

## **About the editors**

Ross Dowling is Foundation Professor of Tourism in the School of Marketing, Tourism and Leisure, Faculty of Business and Law, at Edith Cowan University in Western Australia. Internationally he is an Advisor for the UNESCO Global Network of National Geoparks (HQ France), Executive Board Member of the Indian Ocean Tourism Organization (Oman), Co-founder, International Cruise Research Society (Germany) and a Life Member of the Outward Bound Trust (New Zealand). In Australia he is Co-founder and Executive Director



of Ecotourism Australia as well as an Advisor to Cruise Down Under. In Western Australia he is Chair of the Forum Advocating Cultural and Eco Tourism (FACET) as well as a Council Member of the Royal Automobile Club and the Minister of Tourism's appointee to the Council of the National Trust. He is a Life Member of the Australian Association of Environmental Education (WA).

Professor Dowling conducts international research in the fields of geotourism, cruise ship tourism and ecotourism with over 200 publications. In recent years he has co-authored or co-edited nine books on tourism. They are *Ecotourism*, *Tourism in Destination Communities*, *Natural Area Tourism*, *Ecotourism Policy and Planning*, *Wildlife Tourism*, *Geotourism*, *Cruise Ship Tourism*, *Coastal Tourism Development* and *Geotourism: the Tourism of Geology and Landscape*. Two have been translated into Chinese, one into Persian and others published in India.

In 2008 he convened the Inaugural Global Geotourism Conference in Australia and was Advisor to the Sarawak Tourism Board for the Second Global Geotourism Conference held in Mulu, Malaysian Borneo in 2010.

David Newsome is an Associate Professor in the School of Environmental Science at Murdoch University, Perth, Western Australia. His principal research interests are geotourism and the biophysical impacts of recreation and tourism in protected areas. Professor Newsome's research and teaching focus on the sustainable recreational use of landscapes and the assessment and management of tourism activity in protected areas. He is the lead author of two books Natural Area Tourism: Ecology, Impacts and Management and Wildlife Tourism and co-editor of both



*Geotourism* (2006), a book which has helped set the scene for the emergence of geotourism as a distinct discipline within the area of natural area tourism, as

well as Geotourism: the Tourism of Geology and Landscape (2010).

Together the editors have edited three other books on geotourism:

- ♦ *Geotourism* (2006) Ross Dowling and David Newsome (eds), Butterworth Heinemann, UK
- ♦ Inaugural Global Geotourism Conference Proceedings (2008) Ross Dowling and David Newsome (eds), Promaco Conventions, Australia
- ♦ *Geotourism: the Tourism of Geology and Landscape* (2010) David Newsome and Ross Dowling (eds), Goodfellow Publishers, Oxford. This is the companion volume to *Global Geotourism Perspectives*.

## **Dedications**

To Herman Van Duren (1959–2009) my good friend, originally from Zimbabwe, then latterly of Australia, who passed away at the age of 50, far too young. He was a truly great man, a wonderful son, husband, father, work colleague and friend. He will be forever in our thoughts and our heart. His spirit lives on through his wife Marga and children Paul, Adele and Daniel. To them we give much love.

To my wife Wendy and family members: Jayne, Trevor, Shenee and Paige Belstead (England); Simon, Lynette, Amelie and Ewan MacLennan (Australia); Mark, Jess and Nessa Dowling (Australia); Tobias and HyeHyang Dowling (China), Aurora, Mike, Helena and Nina Gibbs (New Zealand) and Francis Dowling (New Zealand).

Ross Dowling

Dedicated to my wife Jane and children Benjamin and Rachel.

David Newsome

## **Acknowledgements**

The editors would like to thank a number of people who contributed to this book. They include the authors and publishing staff. First we would like to thank the nineteen contributors. Some we have known for many years and have worked with before, others were unknown to us before this project. Some are emerging new or young researchers whereas others are icon academics and world famous practitioners. All we have got to know better through the many iterations of the text during the evolution of the book and we salute each and every one of you for having the faith in this project and the fortitude to deal with our demands over a long period of time. This book is yours and we know that it has been immeasurably enriched by your contributions.

We particularly wish to thank the staff of Goodfellow Publishers, especially Tim Goodfellow (Co-Director) and our old friend Sally North (Publisher), who worked with us on our first book on *Geotourism* back in 2006.

Individually as editors we wish to thank some people.

**Ross Dowling** would like to thank his co-editor David Newsome. We have worked well together over the years authoring and editing a number of books. As always the experience in co-editing this book has been extremely productive and very enjoyable.

I also wish to thank Mr Francisco Dousdebes, Environmental Affairs Manager, Metropolitan Touring, Ecuador for his assistance with the text and photos for the case study on Geotourism in the Galapagos. He was extremely helpful in introducing me to the possibilities of undertaking geotourism in this World Heritage Area.

My love of geology began through the interest of a friend, Donald Lumsdon, from Nelson, New Zealand. He started my lifetime fascination with the subject. It was professionally encouraged and enhanced by the comprehensive knowledge of an early lecturer and mentor, Professor Paul Williams, Professor of Geography and globally recognised karst geomorphologist, whilst I studied under his direction at the University of Auckland, NZ. In recent years I acknowledge my renewed interest comes from working with my co-editor David Newsome, a passionate advocate of exploring and understanding the world through geology and landforms.

As with all previous books, I wish to acknowledge the support of my employer, Edith Cowan University, one of Australia's leading new generation universities, that is committed to excellence in teaching and research. It is a truly great university.

Initial thanks goes to Professor Kerry Cox (Vice Chancellor) who continues to inspire me and encourage me to achieve great things, as well as A/Professor David Clark-Murphy (Head, School of Marketing, Tourism and Leisure), and Tourism Program Staff Dr Dale Sanders and Dr Iris Mao. In addition Julie Con-

nolly, Anna Johansson and Leishele Pearce (Administration Officers, School of Marketing, Tourism and Leisure) have also contributed to my work through their excellence as efficient administrators and superb colleagues.

I also wish to thank my many Australian and international students from around the world who have participated in my undergraduate and post-graduate Geotourism classes. We have had a lot of fun and I have learned a lot about the industry from your research assignments and oral presentations.

I wish to thank Barry Dufty, Barry Schmidt, David Barratt-Boyes and Eccles Dzedins for their interest in my work and constant friendship over many years. As former classmates at Auckland Grammar School, New Zealand, they have continued to both encourage and inspire me through their syupport and input into my life over the past almost fifty years.

Finally I wish to thank my wife Wendy for her unfailing love and support through this my ninth book in the last nine years. I could not have achieved this without her. I also wish to thank my children and grandchildren for the contributions they have made, and continue to make, to my life. This book is part of my legacy for you all.

**David Newsome** would like to thank his wife Jane who continues to support these book-writing projects. I would particularly like to express my appreciation to Young Ng who introduced me to the amazing geology of Hong Kong. Thanks also go to John Hull for facilitating the opportunity to visit Iceland in 2009 and to Edward Huijbens and Jóna Matthíasdóttir and their many colleagues in Iceland who demonstrated outstanding hospitality and showed me the geological sights of northeast Iceland – a world-class geotourism destination. I would also like to give thanks to the Hall family in South Africa who transported me to the Cederberg and the West Coast Fossil Park in the Cape.

I also wish to acknowledge Murdoch University and all of the staff in the School of Environmental Science who support my research interests in geotourism.

## **Preface**

This book is the companion volume to *Geotourism:the Tourism of Geology and Landscape*, edited by ourselves and published by Goodfellow Publishers, 2010. Whereas the first volume sets the scene by defining and characterising the subject, this book brings together in the second volume a range of case studies of geotourism from a number of countries from around the world.

The editors of this volume originally worked together on their earlier book *Geotourism* (Dowling and Newsome (eds), Butterworth Heinemann, Oxford, 2006). Having published the first major work on this new subject, they then hosted the world's first geotourism conference, the Inaugural Global Geotourism Conference 'Discover the Earth Beneath our Feet'. This was held in Perth, Western Australia from 17–20 August 2008. Over 220 delegates from 36 countries participated in the conference which has helped broaden our knowledge of geotourism and introduce the concept of geoparks to many nations in the southern hemisphere. The conference was held during the International Year of Planet Earth and was endorsed by UNESCO.

Arising from the conference was a 478-page book, *Inaugural Global Geotourism Conference Proceedings*, (Dowling and Newsome (eds), Promaco Conventions, Australia, 2008). It comprised over 100 abstracts and papers and quickly sold out due to strong demand for information on the subject.

From this interest we decided to publish a new book to update the subject we first visited in 2006. Interest in our project grew and so this volume represents the second of two new books on the topic. The first volume sets the context for geotourism and provides a clear definition of it as well as information on its characteristics. It covers information on landscape appreciation, geoheritage, management, interpretation, education and the future of geotourism.

This companion volume brings together a range of geotourism case studies from a number of countries including Australia, Brazil, China, Greece, Ireland, Malaysia, Mauritius, Oman, South Africa and the USA. Taken together the two books lift the subject to another level and provide an informed platform on which to build the future of geotourism.

Naturally these two books form only part of the picture. There are other books and journals, much research and of course now many conferences on geotourism. Recent books include *GeoTourism in Ethiopia* (edited by Asrat, Demissie, and Mogessie, Shama Books, Ethiopia, 2009) and *Geotourism and Local Development* (edited by de Carvalho and Rodrigues, Câmara Municipal de Idanha-a-Nova and Geopark Naturtejo da Meseta Meridional, Portugal, 2009).

Journals include *GeoTurystyka (Geotourism)*, published by the Inter-national Association of Geotourism in Poland (www.geoturystyka.pl) and *Geoheritage* published by ProGeo, the European Association for the Conservation of the

Geological Heritage, Portugal (www.springer.com). Another useful publication is *Earth Heritage*, 'The Geological and Landscape Conservation Magazine', published by the Joint Nature Conservation Committee, Natural England, the Scottish Natural Heritage and the Countryside Council for Wales (www.seaburysalmon.com/earth.html).

Research is being conducted in a range of countries as evidenced by the chapters in this book and its companion. Conferences abound on the subject with the World Heritage and Geotourism Conference hosted by the Geological Society of South Africa, held in Pretoria from 4–5 June 2009; the 8th European Geoparks Conference focusing on geotourism, held from 12–14 September 2009 at Geopark Naturtejo, Portugal and the Second Global Geotourism Conference held from 17–20 April 2010 at Gunung Mulu World Heritage Region, Sarawak, Borneo, Malaysia.

Thus the subject of geotourism is growing rapidly. This book is a research volume which aims to add knowledge to the many facets of this emerging subject. It has been compiled for a broad audience including natural area tourism professionals, planners and managers; government and business decision-makers; and students from a wide range of disciplines seeking general information on geotourism development in one volume. We hope that you enjoy it as well as its companion volume which sets the theoretical framework for the subject, *Geotourism: the Tourism of Geology and Landscape.* 

Ross Dowling and David Newsome Perth, Australia, January 2010

## **Chapter extract**

# To buy the full file, and for copyright information, click here

http://www.goodfellowpublishers.com/academic-publishing.php?promoCode=&partnerID=&content=story&st

oryID=235



All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recorded or otherwise, without the written permission of Goodfellow Publishers Ltd

All requests should by sent in the first instance to

rights@goodfellowpublishers.com

www.goodfellowpublishers.com