

AUSTRALIAN NATURAL HISTORY SERIES

AUSTRALIAN BUSTARD



MARK ZIEMBICKI



CSIRO
PUBLISHING

© Mark Ziembicki 2010

All rights reserved. Except under the conditions described in the *Australian Copyright Act* 1968 and subsequent amendments, 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, recording, duplicating or otherwise, without the prior permission of the copyright owner. Contact **CSIRO PUBLISHING** for all permission requests.

National Library of Australia Cataloguing-in-Publication entry

Ziembicki, Mark.

Australian bustard/Mark Ziembicki.

9780643096110 (pbk.)

Australian natural history series.

Includes index.

Bibliography.

Bustards – Australia.

598.320994

Published by

CSIRO PUBLISHING

150 Oxford Street (PO Box 1139)

Collingwood VIC 3066

Australia

Telephone: +61 3 9662 7666

Local call: 1300 788 000 (Australia only)

Fax: +61 3 9662 7555

Email: publishing.sales@csiro.au

Web site: www.publish.csiro.au

Cover photos by Bruce Doran

Set in 10.5/14 Adobe Palatino, Optima and Stone Sans

Edited by Janet Walker

Cover and text design by James Kelly

Typeset by Desktop Concepts Pty Ltd, Melbourne

Printed in China by 1010 Printing International Ltd

CSIRO PUBLISHING publishes and distributes scientific, technical and health science books, magazines and journals from Australia to a worldwide audience and conducts these activities autonomously from the research activities of the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

The views expressed in this publication are those of the author(s) and do not necessarily represent those of, and should not be attributed to, the publisher or CSIRO.

NOTE TO INDIGENOUS PEOPLE

Readers are warned that this book may contain images and other references to deceased Indigenous people, which may cause sadness or distress, particularly to the relatives of these people.

CONTENTS

Preface	vii
Acknowledgements	ix
1 Talking turkey	1
2 Bustard Dreaming	11
3 Taxonomy and characteristics	19
4 Status, distribution and habitat	27
5 Diet and the daily routine	45
6 Exploding bustards	59
7 Movements	69
8 Threats and conservation	81
Bibliography	92
Index	101

PREFACE

Sighting an Australian bustard for the first time in the wild is a memorable experience for many people. I still vividly recall my own first encounter with these impressive birds. It was in the Lakefield National Park region of northern Queensland. As a southerner I vaguely knew of the bustard, but the large male standing his ground before us as we pulled up in our Toyota struck me by his size and stately appearance. The encounter was brief, but it left an indelible impression and that feeling of excitement one gets when sighting a new species, particularly one of such grandeur and mystery, for the first time. I wasn't to know it at the time, but our paths were to cross again in a decidedly more profound manner.

A few years later the bustard was to become the focus of my PhD research. In choosing a study subject, my intention was to focus on a single species that could be used as a model for examining the complex movement patterns made by many of Australia's birds. The bustard is considered a highly mobile species that undertakes widespread and dispersive movements in relation to highly variable environmental conditions. It also employs an interesting and highly specialised mating system, while its cultural significance to Aboriginal people across the country adds an additional element to its appeal. For such reasons the bustard, if you'll pardon the pun, seemed to fit the bill nicely as a potential study subject. To my surprise, it soon became obvious that very little was known about the species. The Australian bustard had never been formally studied in the field. Much of what was known was based on descriptive or anecdotal accounts by amateur naturalists and casual observers. Max Downes had undertaken some pioneering surveys in parts of the Northern Territory and South Australia, while the only detailed study of the bustard's behaviour was based on a captive population in southern Australia by Kate Fitzherbert in 1978. Much of the information making up this book is based on these pioneering studies and in large part on my own research of the species ecology in the tropical savannas of northern Australia. In the outback, most people know the bustard, where it is more commonly known as the bush or plains turkey. However, the species remains poorly known to most Australians. It is my intention in writing this book to shed some light on the species and convey some of the charm and mystery of this cryptic and lordly icon of the outback.

ACKNOWLEDGEMENTS

CSIRO Publishing provides an important avenue for publishing natural history and science publications that highlight Australia's unique and wonderful natural heritage. I would like to thank them for taking on the book and the opportunity to document here aspects of the cultural significance and biology of the Australian bustard in an easily accessible and quality format. I would especially like to thank John Manger, Tracey Millen and Janet Walker for their assistance in preparing this publication.

Although until recently the Australian bustard had not been formally studied in detail in the field, the pioneering work of Max Downes and Kate Fitzherbert, and the many observations made by numerous observers that are well summarised in the *Handbook of Australian, New Zealand and Antarctic Birds* (HANZAB) series, have significantly added to our knowledge of the species. In addition, several other closely related bustard species have been studied in detail by various researchers. I am indebted to their contributions and insights, many of which I draw on here. Much of the information presented in this book is based on research conducted for my PhD thesis while based in Darwin at the Biodiversity Conservation Unit (BCU) of the Northern Territory (NT) Department of Natural Resources, Environment and the Arts, and while enrolled at the School of Earth and Environmental Sciences at the University of Adelaide. These studies and this book were made possible by the substantial in-kind and logistical support of these institutions. I would like to thank all the staff at the Biodiversity Conservation Unit in Darwin, with particular thanks to Irene Rainey, Charmaine Tynan, Brooke Rankmore, Owen Price, Craig Hempel, Cameron Yates, Riikka Hokkinnen, Felicity Watt, Alaric Fisher, Brydie Hill and Jenni Low Choy for support and specific help at various times. I am particularly grateful for the support, encouragement and patience of John Woinarski (BCU) and David Paton (University of Adelaide). More than just academic supervisors, both are friends, role models and significant inspirations to wildlife biologists across the country and further afield.

Field studies for the PhD research were primarily conducted at the Douglas-Daly Research Farm and the Victoria River Research Station (Kidman Springs) in the Top End of the Northern Territory. Both stations are run by the NT Department of Regional Development, Primary Industry, Fisheries and Resources. Thanks to Peter O'Brien, Don Cherry, Tony Moran

and all staff at these facilities. I am also grateful to the many volunteers who contributed their time in often trying circumstances in the pursuit of knowledge concerning bustards. Special thanks to Colin Bailey, Tony Dingwell, Bill Gordon, Claudia Franco, Luis Verissimo, Pedro Rocha and Jarrah. Financial support for field work was provided by a number of organisations. I am grateful to the Herman Slade Foundation as the principal supporter, and to all other contributors including Land & Water Australia (through the Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry), Stuart Leslie Bird Research Award, Australian Bird Environment Fund, the Wildlife Conservation Fund (SA Department of Environment and Heritage) and Bruce Doran (Australian National University). Financial and in-kind support was also provided by the Tropical Savannas Cooperative Research Centre (TS CRC). The Tropical Savannas CRC has been instrumental in facilitating multi-disciplinary research in Australia's tropical savannas and in making knowledge and expertise available to the broad range of stakeholders that use this extensive and increasingly impacted region. In doing so, the TS CRC has played an important role in improving conservation and land management outcomes in the region.

Comments were received on various drafts of chapters in this book from Brydie Hill, Sarah Whiting, and Anna Daniels. Additional comments and assistance on other aspects of the study and publication came from John Woinarski, David Paton, Tom Vigilante, Julian Reid, Peter Dostine, Tony Griffiths, Gabriel Crowley, Jerome Thorbjornsen, Mick Armstrong and Michael Braby. Many thanks to them all.

Jane Bowland patiently tracked down information from disparate sources concerning bustards, most notably including a copy of the original excerpt of Daniel Solander's scientific description of the bustard made available by the trustees of the Natural History Museum, London. Bill Harney, an Aboriginal elder of the Wardaman language group in the Northern Territory, provided valuable insights into the significance of bustards to his people. Thanks also to Tara Dodd of the South Australian Museum for organising the use of the 'Turkey Dreaming' painting by Michael Jupurrulla Rockman and Faye Nungarrayi Gibson. The images of Turkey Flat winery wines were provided by the winery's proprietor, Peter Schulz. The State Library of South Australia provided the image of a bustard shot during the Madigan expedition to the Simpson Desert in 1939. Jim Bannon of the Bustard Eagles Rugby League Club provided an image of the club's crest.

Acknowledgements

Thanks also to the photographers that greatly enhanced this publication by making their images available: Steve Wilson, Jon Altman, Jonathan DeLaine, Nicole Bartsch, Bruce Doran, Rohan Clarke, James Hager, Robert Elliot, Jamie Anderson and Tony Eales.

Finally and not least, on a personal note to family and friends for invaluable love and support in various guises that made this work possible, thank you to Anna, Alicia, Luiza, Szymon, Brydie, Felicity and Jarrah.