

Conservation

Second Edition

The importance of conservation is growing each year, with increasing concerns over the destruction of biodiversity and the rising awareness of ecosystem services generating new debates on the human–nature relationship.

This compact overview integrates the process, theory, and practice of conservation for a broad readership, from non-specialists to students and practitioners. Taking a global perspective, it uses examples from around the world to illustrate general themes and show how problems arise from the impact of societal trends on ecological communities. A significant practical component will be particularly valuable for environmental professionals, outlining the requirements for rigorous surveys, biodiversity valuation, the assessment of impact and its mitigation.

Thoroughly revised and updated, this second edition reflects trends towards embracing multiple disciplines, considering the links between ecology and the social sciences and bringing conservation to the heart of sustainability and environmental policy.

Clive Hambler is Lecturer in Biological and Human Sciences at Hertford College, Oxford, and **Susan M. Canney** is a research associate in the Department of Zoology, Oxford and Project Leader of the Wild Foundation's Mali Elephant Project. They both teach several courses for Departments and Schools within the University of Oxford.

The authors have, between them, over fifty years' experience of teaching conservation at a range of levels, from undergraduate to doctoral, layperson to business executives and from the voluntary sector to school parties. They have also worked extensively in practical conservation projects and environmental consultancy.

Cambridge University Press
978-0-521-18168-6 - Conservation: Second Edition
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SECOND EDITION

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CAMBRIDGE UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

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

Information on this title: www.cambridge.org/9780521181686

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First published 2004

Second edition 2013

3rd printing 2015

Printed in the United Kingdom by Print on Demand, World Wide

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

Library of Congress Cataloguing in Publication Data

Hamblen, Clive, 1960–

Conservation / Clive Hambler and Susan M. Canney. – 2nd ed.

p. cm.

ISBN 978-0-521-18168-6 (pbk.)

1. Conservation biology. I. Canney, Susan M. II. Title.

QH75.H3626 2012

333.7–dc23

2012020520

ISBN 978-0-521-18168-6 Paperback

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978-0-521-18168-6 - Conservation: Second Edition
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Preface to the Second Edition

Conservation is at the core of environmental science and action. It is increasingly influencing the policy of governments and the behaviour of individual people. Maintenance of the diversity of species and habitats and the sustainable use of resources are essential to protect the options, welfare and prosperity of future generations. Many would argue that it is also a strong moral imperative that humanity does not needlessly destroy other inhabitants of this planet.

This book aims to give an overview of conservation and to demonstrate the many interdependent specialisms it requires. We emphasise generalities, which are illustrated by examples from around the world. The book is intended as an aid for coursework, fieldwork and management – and to generate debate. A huge amount is being written about conservation, and this book should help to guide readers towards the most influential specialist sources.

Environmental sciences are advancing rapidly, against a cultural and policy background that is changing even faster. This second edition contains substantive updating in all chapters, and colour plates. There have been advances in knowledge about wildlife, including its richness and distribution, while the discussion of ecosystem services, sustainability, resilience and mitigation has risen in prominence, helping to emphasise human links to nature. Sections on marine biology, sustainability, the landscape matrix, restoration and monitoring are heavily revised, as is the chapter on policy, environmental economics and behaviour. We now include referencing to sources, particularly where topics are controversial or the material might be hard to find – and we urge readers to review the supporting evidence for themselves. We have included detailed research on European semi-natural habitats as this has increasing relevance to cultural landscapes and sustainability worldwide. Technical terms are kept to a minimum. A definition is given at the first use of many terms and phrases, so the index can be used as a glossary. We conclude each chapter with a short list of the key messages it contains. There is slight overlap between some sections, to make each more self-explanatory. In the final chapter we give a brief case study of conservation in action – protecting elephants in a complex socio-economic system in the Mali desert – which illustrates how the subjects of all the previous chapters can integrate in a single project.

x **Preface to the Second Edition**

We hope that we have made the book useful to all those interested in environment and sustainability, from beginners to professionals. It is based on our teaching to students and professionals of many backgrounds, and on our other professional work in conservation practice and policy. Since the first edition (in 2004) there have been major practical successes, and conservation has moved forwards – but not fast enough, and most threats have risen. Our measure of the success of this book will be how much it helps those of us who care about our own and other species to become more effective conservationists.

We thank the many people with whom we have debated these issues over the years and who have provided support in many ways. They include Mark Duchamp, Frank Götmark, Tim Guilford, Peter Henderson, Paul Johnson, Andrew Loveridge, David Macdonald, Vance Martin, Lord Robert May, John Newby, Alex Rogers, David Rogers, Mark Seaward, Martin Speight, Phil Sterling, Belinda Stewart-Cox, Sir Crispin Tickell, Graham Wragg and Nobuyuki Yamaguchi – who also drew several of the figures. The opinions expressed are our own and may not be shared to the same degree by both. Any errors are also our own. Several publishers and authors very kindly gave permission to reproduce illustrations, as noted in the captions. In Oxford, Hertford College, the Department of Zoology and many students provided a stimulating environment. Cambridge University Press, and particularly Dominic Lewis, Lynette Talbot, Caroline Mowatt, Sarah Payne, Sarah Beanland and colleagues, were immensely efficient and encouraging. We thank our families for encouraging our biophilia.