Defending Biodiversity

Environmental Science and Ethics

Jonathan A. Newman
Gary Varner
Stefan Linquist

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Debates about the environment and how humans ought to treat it have gone on for decades, yet arguments in favor of preserving biodiversity often lack empirical substance or are philosophically naïve, making them far less effective than they could be. This book critically examines arguments that are commonly offered in support of biodiversity conservation. The authors adopt a skeptical viewpoint to thoroughly test the strength of each argument and, by demonstrating how scientific evidence can be integrated with philosophical reasoning, they help environmentalists to better engage with public debate and judiciously inform public policy. This interdisciplinary and accessible book is essential reading for anyone who engages in discussions about the value of biodiversity conservation.

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Cover image: photo courtesy of Jeremy Bannister/Fairfax Syndication

CAMBRIDGE UNIVERSITY PRESS
www.cambridge.org

ISBN 978-0-521-14620-3

Cover designed by Hart McLeod Ltd

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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

4843/24, 2nd Floor, Ansari Road, Daryaganj, Delhi – 110002, 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
Information on this title: www.cambridge.org/9780521768863
DOI: 10.1017/9781139024105

First published 2017

Printed in the United Kingdom by Clays, St Ives plc

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

Library of Congress Cataloging-in-Publication Data
Names: Newman, Jonathan A., author. | Varner, Gary E. (Gary Edward), author. | Linquist, Stefan Paul, author.
Title: Defending biodiversity : environmental science and ethics / Jonathan A. Newman, University of Guelph, Gary Varner, Texas A & M University, Stefan Linquist, University of Guelph.
Description: Cambridge, United Kingdom : New York, NY : Cambridge University Press, 2017. | Includes bibliographical references and index.
Identifiers: LCCN 2017023820 | ISBN 9780521768863 (hardback)
Subjects: LCSH: Biodiversity – Moral and ethical aspects.
Classification: LCC QH541.15.B56 N49 2017 | DDC 333.95–dc23
LC record available at https://lccn.loc.gov/2017023820

ISBN 978-0-521-76886-3 Hardback
ISBN 978-0-521-14620-3 Paperback

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Preface

This book has three coauthors. Jonathan Newman is an ecologist, former Director of the School of Environmental Sciences, current Dean of the College of Biological Science, and adjunct professor in the Department of Philosophy at the University of Guelph. Gary Varner is an environmental philosopher and animal ethicist, and former head of the Department of Philosophy at Texas A&M University. And Stefan Linquist is a philosopher of biology at the University of Guelph.

We want to begin by saying very clearly that:

> ***All three of us consider ourselves to be environmentalists, and we all think that biodiversity ought to be conserved.***

We emphasize this up-front, because some may view this book as an attack on environmentalists and on the view that biodiversity ought to be conserved. It is not. Throughout this book we critically analyze various popular arguments commonly offered in support of biodiversity conservation. We adopt a critical or 'skeptical' stance toward these arguments not because it is our aim to defeat them, but rather because we hope to test their strength. As the reader will soon discover, some arguments fare better than others, and none of them offer full-blown support for the extensive conservation programs that some environmentalists endorse. As we shall explore, some arguments for biodiversity conservation lack adequate empirical support in ways that challenge conventional assumptions, and sometimes they commit one to positions that have unpalatable consequences.

Nevertheless, we did not write this book to dismiss environmentalists' concern for biodiversity. Rather, our hope is that reading this book will help environmentalists *improve* the arguments they make for conserving biodiversity. This is important because

promoting conservation often involves convincing others that biodiversity should be protected at the expense of some human activity such as development, and it almost always involves arguments with people who do not immediately share our views. If environmentalists are to be persuasive, then we will have to bring good arguments to these debates. And, as any seasoned debater will know, it's always important to know the limitations and weaknesses of one's arguments. Appreciating the limitations of our current arguments can help us engage more effectively in such discussions in the future. The questions we raise about various arguments have no easy answers, and, indeed, it is this fact that makes the study of them, *by environmentalists*, all the more important.

All three of us, in our teaching, in discussions with friends, family, and colleagues, and in our research, engage repeatedly in arguments about the environment and about how humans ought to treat it. These experiences motivated us to write this book. Arguments about the environment and about how humans ought to behave toward the environment have been ongoing in the academic discipline of environmental ethics for decades. All of the opening gambits in these arguments are well-known, and have equally well-known responses. In our experience, many environmentalists seem unaware of these 'moves and counter moves.' As a result, we waste a lot of time and energy exploring old ground, to the detriment of advancing the quality of our discussions. We hope that by exploring these opening moves and countermoves, the reader will be better able to see where the most fertile ground is located, and how they can best engage with the subject matter.

In writing this book, we struggled with finding the right voice for our presentation. There are places in the text where we are writing about arguments that others have advanced, some of which we agree with and others of which we do not. Indeed, we do not always agree among ourselves on every position, and we explore some of our differences in the final chapter. Nevertheless, there are (many) conclusions on which we all agree, and in those cases we will make statements along the lines of "We think that . . ."

This approach proved particularly tricky when we had to present positions that we think many environmentalists hold, even though the three of us do not necessarily hold those positions. As we said, we consider ourselves to be environmentalists, even though we don't all subscribe to each and every position that characterizes what we call 'the environmentalist agenda.' Environmentalism comprises a very broad set of personal and political positions, and it is common to find disagreement even among environmental groups in their positions on individual issues. We thought that by limiting our discussion to the conservation of biodiversity, we might perhaps narrow the agenda enough that we could find sufficient common ground on which to start our exploration of these ideas. Hence, there are many places in the book where we refer to 'environmentalists' or 'the environmentalist agenda.' These terms are not meant to be pejorative in any way; indeed, at various places in the book we will use language such as "we environmentalists" to indicate that we do not consider ourselves to be above or in any way outside the group we are labeling 'environmentalists.'

The book follows a fairly simple structure that aims to mirror conversations (arguments) about biodiversity conservation. We start out, in Chapter 1, by defining our terms (e.g. 'biodiversity,' 'intrinsic value,' etc.) and laying out something that we think approximates the environmentalist agenda. With the stage set in Chapter 1, we are ready to engage with the common arguments for why we should conserve biodiversity. We divide these arguments into two kinds, which we label:

1. ***Instrumental value defenses***: That we ought to conserve biodiversity because it is valuable to humans. In economics this value is called 'instrumental value,' and we will refer to these defenses collectively as 'instrumental value defenses.' Philosophically, this type of argument is a commitment to an anthropocentric ethical position. What matters morally are human beings and their interests. Everything else, including biodiversity, has instrumental value. It is a means to an end, and that end is human welfare.

2. ***Intrinsic value defenses***: That we ought to conserve biodiversity for non-instrumental value reasons. Philosophically, this type of argument involves a commitment to one of several non-anthropocentric ethical positions. Things additional to (or perhaps other than) human beings and their interests matter morally, and biodiversity is one of these things. Regardless of how useful biodiversity is (or is not) to humans, we ought to conserve it because it is the morally correct thing to do. This tactic amounts to a claim that biodiversity has what philosophers refer to as 'intrinsic value,' and we will refer to these arguments collectively as 'intrinsic value defenses.'

Part I of the book comprises five chapters and considers the instrumental value arguments. Chapter 2 is a fairly lengthy chapter (because the topic is rich and complex) that examines the argument that we should conserve biodiversity because of the ecosystem services that we derive from it. Chapter 3 is similarly lengthy, and explores 'precautionary defenses.' These defenses take the form of defending conservation over development for reasons of biodiversity's uncertain usefulness in an uncertain future. Chapter 4 explores the arguments that we ought to conserve biodiversity because it is the source of our food, fuel, fiber, and medicine. Chapter 5 looks at arguments based on the value of nature-based tourism and the power of biodiversity to transform how we value nature in general, and biodiversity in particular. We round up Part I with a brief consideration of how far the instrumental value arguments get environmentalists in their defense of biodiversity conservation. In Part I the strength of the arguments rests primarily on the empirical evidence – what the data indicate – although problems with the precautionary defenses are also philosophical in nature. We think that readers may conclude from Part I that instrumental value defenses cover a lot of biodiversity conservation but they don't cover all of it, and that these defenses also imply some fairly unpalatable, but logically additional commitments. Faced with the perhaps unsatisfying conclusion that there are parts of biodiversity that are not useful to us, or perhaps not *more useful* to us than are the alternatives, environmentalists like to claim that biodiversity doesn't have to be

useful because it has 'intrinsic value,' or that people have some moral/ethical responsibility to conserve it anyway. Some environmentalists will go straight to this point without ever entertaining instrumental value arguments. For these environmentalists, the conservation of biodiversity has *nothing to do* with whether or not it is useful. These environmentalists feel that estimating the economic value of biodiversity is not only wrong, it is wrong-headed! This will be evident to some as we consider the 'implied commitments' that accompany each of the instrumental defenses.

In Part II of the book, we consider in detail the claims of environmentalists for the non-anthropocentric value of biodiversity. In Chapter 7 we provide a brief introduction to the methods that philosophers use to defend moral theories, principles, rules, and moral judgments in general. This chapter will be important as we come to grips with how to assess a claim that biodiversity has intrinsic value. In Chapter 8 we will examine arguments based on claims that (1) sentient non-human animals are worthy of our moral concern, and (2) that all living organisms have intrinsic value and are therefore worthy of our moral concern, independently of their instrumental value to humans. In Chapters 9 and 10, we tackle the broader claims that ecological wholes, such as species and ecosystems, might have intrinsic value. And finally, in Chapter 11, we consider the claim that the aesthetic nature of biodiversity has intrinsic value. We complete Part II with a summary (Chapter 12), in which we reflect on the strengths and weaknesses of the environmentalist's claim that biodiversity has intrinsic value.

We end the book (Chapter 13) with some personal and biographical reflections on our individual value commitments, why we think that humans ought to conserve biodiversity, and the implications of those views for how we live our lives.

Acknowledgments

J.A.N.: I thank Gary Comstock for setting me on this road, Tim Mawson for his help in keeping me on this road, and all of my current and former students and colleagues with whom I have discussed these ideas and issues over the years. I would also like to thank the Canadian Natural Science and Engineering Research Council for their continuing support for my research.

G.E.V.: I'm grateful to Jonathan Newman for conceiving of this project, bringing me on board, and then wisely adding his colleague Stefan to the team. Thanks also to my parents, for supporting my chosen career path, despite the mystification it caused in them. And I thank my colleague, Clare Palmer, for commenting on some parts of the manuscript for which I wrote the first drafts.

S.P.L.: I am grateful to Jonathan and Gary for involving me in this project. Thanks to Madeleine McGreer for helping me understand certain mathematical models in environmental economics, and to Nola Semczyszyn for lending her expertise in aesthetics. I appreciate the many insights from students and community members who participated in the Philosophy Field Course, which met at the University of Guelph and in Tofino, British Columbia. Finally, special thanks to Lucy, Marita, and Katarina for their inspiration and encouragement.

Contents