

## Human–Wildlife Interactions

### *Turning Conflict into Coexistence*

Human–wildlife conflict (HWC) is one of the most complex and urgent issues facing wildlife management and conservation today. Originally focused on the ecology and economics of wildlife damage, the study and mitigation of HWC has gradually expanded its scope to incorporate the human dimensions of the whole spectrum of human–wildlife relationships, from conflict to coexistence. Having the conflict-to-coexistence continuum as its leitmotiv, this book explores a variety of theories and methods currently used to address human–wildlife interactions, illustrated by case studies from around the world. It presents some key concepts in the field, such as values, emotions, social identity and tolerance, and a variety of insights and solutions to turn conflict into coexistence, from individual level to national scales, including conservation marketing, incremental and radical innovation, strategic planning and socio-ecological systems. This volume will be of interest to a wide range of readers, including academics, researchers, students, practitioners and policy-makers.

BEATRICE FRANK is the Social Science Specialist for Capital Regional District Regional Parks, Canada and an adjunct professor at the University of Victoria. In the last ten years, she has focused on better defining tolerance and coexistence and developed the conflict-to-coexistence concept proposed in this book, which she is furthering in her most recent research and publications on wildlife and protected areas.

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# Human–Wildlife Interactions

## *Turning Conflict into Coexistence*

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*To Alan Rabinowitz, inspirational leader in  
conservation, who provided us with a visionary  
and inspired path for coexisting with wildlife*

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## Foreword

ROSIE WOODROFFE AND ALAN RABINOWITZ

Throughout the world, people have wildlife for neighbours. Like their human neighbours, some of these wildlife species are beloved community members, while others are downright disruptive. Wildlife can be especially hard to live with if they kill people's domestic animals or destroy their crops. Some species – like lions, elephants and bears – can even threaten human lives on occasion.

For hundreds of years, people viewed such wildlife as adversaries and sought to reduce their impact by killing them. Species like rats and coyotes thrived nonetheless; others did not. Tasmania's thylacine, extirpated due to its predation on sheep, is among the most famous victims; its analogue in the South Atlantic, the Falkland Island wolf, met the same fate half a century earlier. Other species, like prairie dogs, persisted in tiny fractions of their historic ranges. For species as dissimilar as hen harriers and African wild dogs, it is deliberate killing by people which prevents population recovery and sets populations on a path to local extinction.

In 2005 we edited, together with Simon Thirgood, a book entitled *People and Wildlife, Conflict or Coexistence?* which explored how to conserve wildlife species that make difficult neighbours. We recognized that living with wildlife – even endangered wildlife – can have real and serious impacts on people's lives and livelihoods, and we tried to identify the most promising ways to mitigate these harmful impacts while still conserving the wildlife species. We had expected to draw on experience from managing more abundant species, but such experience was surprisingly scant: in most settings where wildlife threatened human lives or livelihoods, the response was to kill the wildlife, and non-lethal approaches had received little attention. For example, while there have now been many trials of non-lethal ways to prevent elephants from damaging crops, it was 2018 before the first such study of garden slugs was initiated. Curiously, lessons learned from managing endangered species may prove useful for the management of more abundant species.

The contributors to our book were mostly trained as biologists, and we focused mainly on technical solutions. We reasoned that an important first step to resolving human–wildlife conflict was to reduce the impact of wildlife on people, and so our book evaluated tools to reduce damage, like herding and crop-guarding, and approaches to offset the costs of such damage, like ecotourism and compensation. But human behaviour is complex, and fostering coexistence with wildlife demands more than adjusting a balance sheet. That is where this new book comes in. Our contributors were mostly experts on the ‘wildlife’ side of human–wildlife conflict, but this book bursts with expertise on the ‘human’ side. It covers topics like psychology, essential to understanding people’s perceptions of their interactions with wildlife, and approaches like marketing and innovation, which can help alter those perceptions in ways likely to benefit both people and wildlife.

Perceptions of coexistence with wildlife are changing rapidly. When we first proposed our book, one reviewer marvelled at the paradox of a book about ‘conserving pests’ and another questioned the need for yet another book about ‘pest management’. Our book marked a step away from such perceptions, away from conflict and towards coexistence. This book takes the next step, emphasizing the need to learn from positive interactions between people and wildlife to resolve more negative interactions, and tackling coexistence not only with the threatened species that we considered, but also with more abundant species that might indeed be termed pests in some settings.

It is exciting to see the concept of coexistence between people and wildlife taking hold, with new and diverse perspectives on how it may be achieved. We wish that our friend and co-editor Simon Thirgood<sup>1</sup> was still here to see it. Every step towards coexistence adds to his legacy, and builds our hope for the future of people and wildlife.

<sup>1</sup> While finalizing this foreword, Alan Rabinowitz passed away, leaving behind a path to further develop a visionary and inspired advocacy for enhancing coexisting with wildlife.

## *Preface*

When we talk about human–wildlife interactions, negative experiences are often most forefront, including situations that involve the injury or death of humans and non-human animals by wild animals, and those that cause damage to crops or to other human belongings. Discourses around human–wildlife conflicts have, indeed, grabbed the attention of practitioners, managers and researchers in the last few decades since this type of conflict is considered to be one of the most critical challenges facing wildlife conservation. However, human–wildlife interactions go beyond the negative impacts that species have on the environment or humans and their belongings. In fact, the research emphasis has recently expanded from a focus on conflicts to include the broad spectrum of interactions between people and wildlife that range from negative to neutral to positive.

In response to this timely and emerging trend, we aim to build upon Woodroffe, Thirgood and Rabinowitz's 2005 book, *People and Wildlife, Conflict or Coexistence?*, by placing a greater emphasis on the coexistence aspect of human–wildlife interactions. Our goal is to contribute to the development of more comprehensive frameworks and approaches, and present a variety of perspectives and solutions that emphasize positive rather than negative aspects of human–wildlife interactions. To foster the inclusion of coexistence in human–wildlife interactions, this book uses the *conflict-to-coexistence continuum* (Frank 2016) as a leitmotiv. This continuum spans from negative to positive attitudes and/or behaviours, which defines the different degrees of conflict and coexistence that characterize human–wildlife interactions. The book also encourages complementary as well as competing perspectives on human–wildlife interactions, as the intent of this contribution is to propose new directions for how best to include positive interactions in human–wildlife research and conservation.

We are thankful and feel very fortunate to have worked with a remarkable team of renowned experts on this book. Together, we have



explored and discussed the conceptual and practical implications, as well as the innovative aspects of shifting the paradigm to encompass human–wildlife coexistence. The first five chapters of this book focus on conceptualizing coexistence and analysing human–wildlife interactions from an anthropocentric standpoint (Chapter 1). We also look at values (Chapter 2), social identity (Chapter 3), emotions (Chapter 4) and tolerance (Chapter 5) from a positive interaction perspective. Novel theories and frameworks are described to better encompass and assess the role played by these factors in shaping human–wildlife relationships. The following nine chapters (Chapters 6–14) portray a series of case studies that include different degrees of neutral to positive interactions between humans and wildlife. The case studies apply frameworks for coexisting with urban wildlife (Chapter 6), governance of long-distance migration (Chapter 8) and effectiveness and acceptability of interventions for coexistence with predators (Chapter 12). Understanding the place wildlife holds in different landscapes is another key theme explored through the lens of carnivores (Chapter 7). The conflict-to-coexistence concept is discussed further by looking at problematic species in Japan (Chapter 9), Indonesia and the USA (Chapter 10) and invasive species in the USA (Chapter 13). The use of beehives as barriers to reduce crop raiding by African elephants (*Loxodonta africana*) (Chapter 11) highlights an innovative approach towards increasing positive interactions with wildlife. To conclude, we offer an overview focused on European institutions working at different scales to foster human–wildlife coexistence for large herbivores and carnivores (Chapter 14). Many of the examples given in this book are biased towards terrestrial wildlife (e.g. elephants, large carnivores and monkeys) due to a historical focus on these taxa. However, the concepts and outcomes of these case studies are broadly applicable to other taxa, and may provide inspiration and solutions to improve the understanding and assessment of neutral to positive interactions with wildlife. In addition, they provide insights into stakeholder engagement and power distribution that can be extrapolated to any wildlife species and are relevant to anyone working on human–wildlife interactions. The last four chapters (Chapters 15–19) depict pathways to make coexistence happen. A series of topics developed in other disciplines, including world-view perspectives (Chapter 15), conservation marketing (Chapter 16), incremental and radical innovation (Chapter 17), socio-ecological and landscape approaches (Chapter 18) and conservation planning (Chapter 19) are discussed from a social science standpoint and applied to foster coexistence with

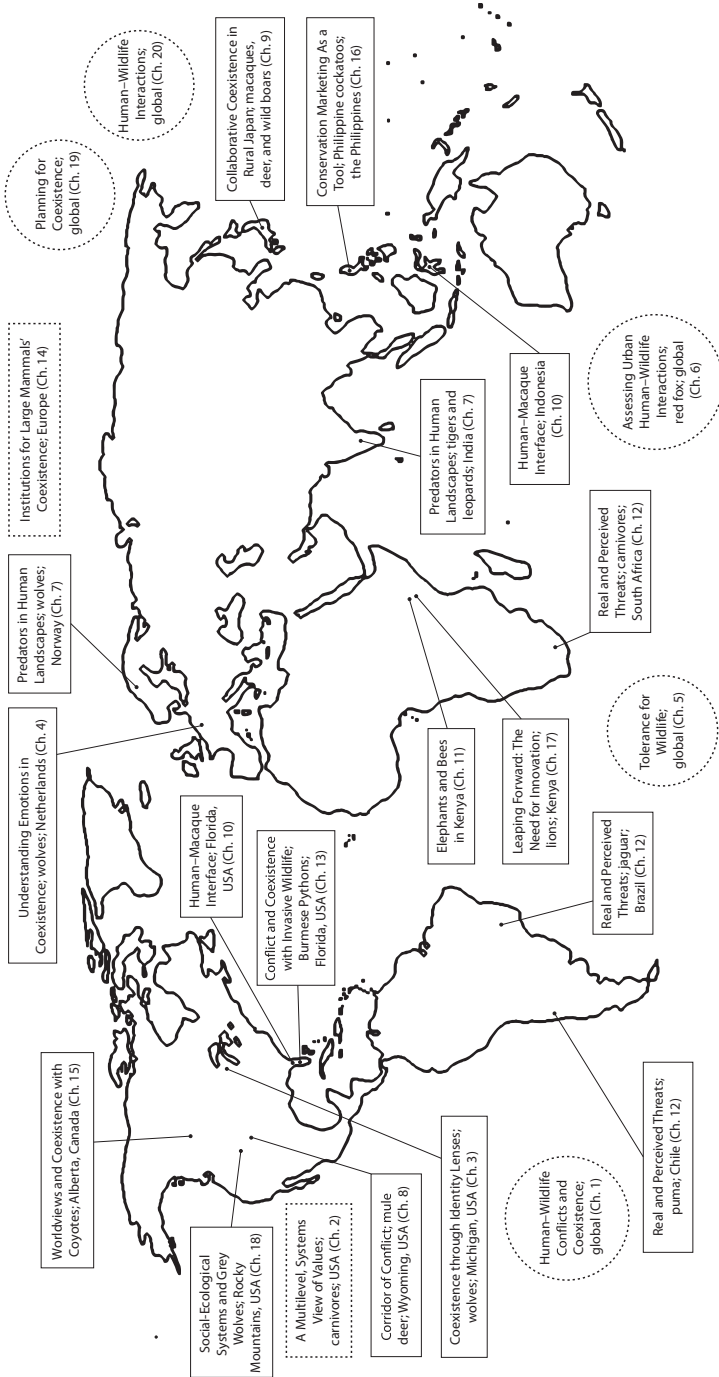
wildlife. A world map (Figure 0.1) that includes all of the topics, species and locations addressed in this book is presented in this preface to offer the reader a better understanding of the broad, diverse and innovative ideas our team has explored, applied and implemented to shift the focus of human dimensions discourse from conflict to coexistence. These new perspectives further push the conflict-to-coexistence continuum and challenge its scale and singular dimension to better encompass the multifaceted nature of human–wildlife interactions. Following the example of Woodroffe et al. (2005), we close the book by offering our conclusions and hopes for a future that entails coexistence with wildlife.

Human–wildlife interactions – and clashes of opinions among stakeholders regarding how to deal with the encounters – will grow as the boundaries between the space in which humans and wildlife exist become more blurred. Through the innovative conceptual and applied contributions in this book, we aim to catalyse a paradigm shift from discourse on human–wildlife conflict to dialogue promoting human–wildlife interactions and coexistence. Exploring when and why people start to accept wildlife in their proximity is key to this endeavour and represents a pathway by which we may begin to shift toward mechanisms that enhance the willingness to coexist with wild species.

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**Figure 0.1** World map showing all the topics, species and locations addressed throughout the book. Map reproduced from Wikimedia and created by Jillian Knox using Illustrator.