

Biological Invasions and Animal Behaviour

How does behaviour affect biological invasions? Can it explain why some animals are such successful invaders?

With contributions from experts in the field and covering a broad range of animals, this book examines the role of behaviour in biological invasions from the point of view of both invaders and native species. The chapters cover theoretical aspects, relevant behaviours and well-documented case studies, showing that behaviour is critical to the success, and ecological and socio-economic impact, of invasive species. Its insights suggest methods to prevent and mitigate those impacts, and offer unique opportunities to understand the adaptive role of behaviour.

Offering a comprehensive overview of current understanding of the subject, the book is intended for biological invasion researchers and behavioural ecologists, as well as ecologists and evolutionary biologists interested in how organisms deal with anthropogenic environmental changes such as climate change and habitat loss.

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Preface

Ever since Ernst Mayr, behaviour has increasingly been perceived as crucial to understanding how animals invade new regions and interact with native species. Surprisingly, however, up to now there has been no book entirely devoted to discussing this subject. The present book is an attempt to fill the gap. By integrating a variety of topics, approaches and study systems, the book presents a broad, up-to-date overview of the mechanisms by which behaviour affects biological invasions. Although in spirit the book is based on basic research, many findings reported throughout the chapters also have obvious conservation applications to prevent and mitigate the impact of invaders.

The genesis of this book is strange, in that the two people most responsible for the idea of developing such a book are no longer involved with it. Back in early 2013, Suzanne Albrecht, who at that time was a Senior Manager at John Wiley publishers, and Mark Hauber of Hunter College of the City University of New York organized an on-line conference on the topic of introduced species and behaviour. Suzanne and Mark had worked together on the journal Ethology, had previously done an on-line conference together on kin recognition, and felt that to do something more applied was a natural follow-up. A number of contributors to this volume participated in the on-line conference, along with one of the co-editors (JSW). During the conference, pre-recorded talks were available to be viewed on specific days, and questions and answers were available to all through on-line access. Following the successful on-line conference, a number of participants expressed interest in developing a book about invasive species from a behavioural ecologist's perspective. At that time, Mark was willing to be a co-editor. JSW agreed to be a co-editor too, but we felt we wanted another co-editor. Suzanne proposed DS as third editor, and the three of us began contacting additional potential chapter authors. In the fall of 2013, before we had submitted a formal book proposal to Wiley, two major changes took place: Suzanne departed Wiley and Mark decided for professional reasons not to continue as a co-editor, since he had become editor-in-chief of The Auk: Ornithological Advances and Acting Associate Provost for Research at Hunter College, and no longer could dedicate enough time to the project. This left the two of us feeling rather stranded. However, Suzanne had written to her friend Martin Griffiths, a Commissioning Editor for Life Sciences at Cambridge University Press, about the project and he contacted us about the possibility of publishing the book with Cambridge, which we decided to do. Then in the fall of 2014, we were told by Cambridge University Press that Martin Griffiths had left. Despite all the changes and bumps in the road, we are very pleased with how the book has turned out. We are very appreciative of the work of



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Preface

Suzanne Albrecht and Mark Hauber for the initial idea for the on-line symposium and book, grateful to Martin Griffiths for getting us through the approval process at Cambridge University Press and grateful to Tim Hyland for editorial assistance in the last stages of the publication process.

Finally, we are in debt to all the authors who contributed to the book. We feel lucky to have been able to join such a bunch of excellent scientists. Our biggest thanks go to all of them. The book also benefited tremendously from many colleagues who accurately reviewed the chapters and we thank all them for their effort.

Judith Weis and Daniel Sol



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