

Preface

It is widely acknowledged that scientific progress has relied on new technology as much as on new ideas to observe nature in the attempt to understand its processes. In the context of the study of wildlife, it is not an exaggeration to consider the subject of this book – camera trapping, the use of automatic cameras taking images of passing animals – as a milestone technology that has advanced the field. Indeed, the use of camera traps has introduced a completely new way to detect wildlife and has led to major discoveries, among which are the discoveries of new species of mammals. An added value of camera trapping is represented by the powerful communicative message of the images themselves: striking ‘moments’ of elusive and rare fauna from anywhere in the planet that can be used to boost conservation awareness worldwide. Indeed several NGOs and conservation agencies have adopted this tool for outreach programmes via the Web and social media. Similarly, camera trapping is emerging as a powerful tool in citizen science, encouraging participation by community members and groups to contribute to the collection of ecological data in their landscapes.

The wide application of camera trapping in science, along with its popularity, has concomitantly raised the need for guidance on the sound use of this tool, from selecting the right camera type among the vast and diverse range of models available on the market, to determine the sampling design, and analysing data potentially using inferential approaches. The importance of such guidance is enhanced by the fact that camera trapping became a very attractive and perhaps even trendy tool; however, it is not obviously always the best method for studying wildlife. As with any other research tools, a clear vision of the research question must precede the choice of the most adequate methodology that enables the scientific question to be answered. Moreover, there is growing integration of camera trapping with different, complementary methodologies (genetic sampling, telemetry, etc.).

On these grounds, this book aims to address comprehensively the multitude of phases involved in the use of camera trapping for scientific research and ecological inference, hence it covers topics from choosing the suitable camera trap model to defining the sampling design, and from the field deployment of camera traps to data management and data analysis for a selection of major types of studies. These latter two steps, and especially data management, are particularly overlooked in the current literature and yet are very relevant given the impressive growth in data collected by modern, digital camera traps. It is precisely the combination of these various and equally important topics into one volume that makes this book unique in the current literature.

The book addresses in great detail the key and most common ecological applications to wildlife research (species’ inventory, occupancy, capture–recapture, community assessment, behavioural studies). While it deliberately does not attempt to present the full array of applications of camera trapping, we believe the knowledge provided to implement these major applications will provide researchers with the fundamental skills for a broader range of uses.

The target spectrum of readers is accordingly comprehensive: students, scientists and professionals involved in wildlife research and management.

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