Practical Field Ecology

Second Edition

C. Philip Wheater,
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with website

WILEY Blackwell

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Since the publication of the first edition, three highly skilled field scientists who gave generously of their time and expertise for the first edition of this book have sadly passed away. All three were expert ecologists and each influenced many generations of young scientists.

We would like to dedicate this second edition to our friends and colleagues: Mike Hounsome, Rob Strachan, and Derek Yalden.

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Preface to the Second Edition

Ecology is a rapidly evolving subject, not least in the techniques available to the field ecologist. Since the publication of our first edition of this project guide, advances have been made in several areas, most notably those that take advantage of modern technological developments. Whilst field ecologists have always sought to invent new methods and improve existing ones for monitoring plants and animals, new mobile technologies increasingly enable the tools for identification and verification of organisms to be literally in a researcher's back pocket. Similar advances in mobile phone apps have facilitated environmental monitoring, which has the potential to reduce the amount of equipment the researcher has to carry and perhaps go some way to providing standardisation of monitoring tools. There has been continued refinement of previously laboratory-based techniques that provide access to information more cheaply and immediately in the field where once we would have had to take samples back to sophisticated laboratories for analysis. Further developments in other technologies have opened up new and exciting opportunities to survey our environment (in the case of drone technology, the sky is literally the limit!). As these developments bed in, it is appropriate to review the tools available to field researchers.

We have extended this second edition to cover a wider range of methods, with a special focus on more recent developments, emphasising the direction of travel of modern field ecology. Following positive feedback from many students and colleagues, we have increased the number of case studies, which demonstrate the realities of working in the field. Developments have also been made recently in the analysis of ecological data, and this is reflected in a broader coverage of some of the more accessible techniques and available software. Since communication of scientific results is highly relevant in today's confusing mix of fact and opinion, we have also expanded our coverage of presentation skills to include publishing in scientific journals and presentation at conferences.

We have been privileged to have had expert advice and constructive criticism from a large number of experts who, in addition to the input to the first edition of this book, have reviewed the plans and implementation of the second edition, provided case studies and photographs, read and commented on individual sections, and generally encouraged us in our endeavours.