

- » Step-by-step instruction on all common undergraduate-level statistical tests in R and Excel.
- » Heavily illustrated in full colour with screenshots, figures and code examples.
- » Extensive support material and end-of-chapter exercises.

This is a book about the scientific process and how you apply it to data in ecology. You will learn how to plan for data collection, how to assemble data, how to analyze data and finally how to present the results. The book uses Microsoft Excel® and the powerful Open Source R program to carry out data handling and analysis, as well as producing graphs.

Statistical approaches covered include: data exploration; tests for difference – t-test and U-test; correlation – Spearman's rank test and Pearson product-moment; association including Chi-squared tests and goodness of fit; multivariate testing using analysis of variance (ANOVA) and Kruskal–Wallis test; and multiple regression.

New in this edition: a completely revised chapter on graphics including graph types and their uses, Excel Chart Tools, R graphics commands and producing different chart types in Excel and in R; an expanded range of support material online, including example data, exercises and additional notes & explanations; a new chapter on basic community statistics, biodiversity and similarity; chapter summaries and end-of-chapter exercises.

This book is written for students of biology, ecology and environmental science although many other scientists will find the text useful as the principles and data analysis are the same in many disciplines. No prior knowledge is assumed and the reader can develop their skills up to and beyond degree level.

About the author

Mark Gardener is an ecologist, lecturer and writer and has worked as a teacher and supervisor around the world. He runs courses in ecology, data analysis and R: the statistical programming language, for a variety of organizations.

About the *Data in the Wild* series

A series of practical books, sharing key tools and methods for the collection, analysis and interpretation of environmental data.

Cover image
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