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Joint Species Distribution Modelling (JSMD) is a fast-developing field and promises to revolutionise how data on ecological communities are analysed and interpreted. Written for both readers with a limited statistical background and those with statistical expertise, this book provides a comprehensive account of JSMD. It enables readers to integrate data on species abundances, environmental covariates, species traits, phylogenetic relationships and the spatio-temporal context in which the data have been acquired. Step-by-step coverage of the full technical detail of statistical methods is provided, as well as advice on interpreting results of statistical analyses in the broader context of modern community ecology theory. With the advantage of numerous example R-scripts, this is an ideal guide to help graduate students and researchers learn how to conduct and interpret statistical analyses in practice with the R-package *Hmsc*, providing a fast-starting point for applying JSMD to their own data.

Cover illustration: (front): An ecological community is an assemblage of potentially interacting species co-occurring at a given time and location. This book provides statistical methods for analyzing observational data on ecological communities and disentangling the many reasons why species may co-occur, such as shared habitat use or biotic interactions. © Geert Weggen; (back): Geert Weggen / Aurora Photos / Getty Images.

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ISBN 978-1-108-71678-9



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