ECOLOGICAL METHODS AND CONCEPTS

An Introduction to Mathematical Models in Ecology and Evolution
Time and Space

Michael Gillman

Students often find it difficult to grasp fundamental ecological and evolutionary concepts because of their inherently mathematical nature. Likewise, the application of ecological and evolutionary theory often requires a high degree of mathematical competence. This book is a first step to addressing these difficulties, providing a broad introduction to the key methods and underlying concepts of mathematical models in ecology and evolution. The book is intended to serve the needs of undergraduate and postgraduate students of ecology and evolution who need to access the mathematical and statistical modeling literature essential to their subjects. The book assumes minimal mathematics and statistics knowledge while covering a wide variety of methods, many of which are at the forefront of ecological and evolutionary research. The book also highlights the application of modeling to practical problems such as sustainable harvesting and biological control.

Based at the Open University since 1990, **Mike Gillman** has contributed to a diverse set of undergraduate and postgraduate courses in biological and environmental science. His research interests are equally broad, spanning population dynamics, community ecology, and evolutionary biology. He has a particular interest in the environment and conservation of Neotropical forests.

Cover image: cyandesign.co.uk

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ISBN 978-1-4051-7515-9

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