

Introduction to Modeling in Wildlife and Resource Conservation



Introduction to Modeling in Wildlife and Resource Conservation provides students with the skills to develop their own models for application in conservation biology and wildlife management. Assuming no special mathematical expertise, the computational models used are kept simple and show how to develop models in both spreadsheet and programming language format.

The book develops thought-provoking applications which emphasize the value of modeling as a learning tool. Beginning with basic descriptive equations, matrix representations, and consumer-resources interactions, the book proceeds to explore applications in simulation, scenarios, harvesting, population viability, metapopulation dynamics, disease outbreaks, vegetation stage and state dynamics, habitat suitability assessment, and model selection statistics. Detailed instructions are given on how to construct spreadsheet models, and programmes are written in True BASIC which forms a readily understandable foundation language. Throughout the book a wide range of examples are used relating to birds, fish, plants, and large African mammals.

An accompanying CD provides models as well as a trial version of the True BASIC programming language.

This book provides an essential introduction to modeling for upper-level undergraduate and graduate students who have completed a basic course in ecology and plan careers in wildlife conservation.

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Cover image: Wildebeest grazing in Masai Mara National Reserve, Kenya

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