

Marc Kéry • Michael Schaub

BAYESIAN POPULATION ANALYSIS USING WinBUGS

A hierarchical perspective

Bayesian Population Analysis using WinBUGS is an introduction to the analysis of distribution, abundance, and population dynamics of animals and plants using hierarchical models implemented in the leading Bayesian software WinBUGS. It will be of interest to quantitative scientists working in the fields of population ecology, conservation biology, evolutionary biology, population management, disease ecology, fisheries or wildlife biology. The accessible text is ideal for self-study and advanced graduate-level courses.

This book:

- Is a statistical modeling book written by ecologists for ecologists
- Contains analyses of simulated data, along with fully commented R code for the generation of these data sets, as well as analyses of real data
- Fully integrates with program R—all analyses are conducted by calling WinBUGS from R
- Illustrates the tremendous modeling freedom given to ecologists when using the simple and flexible BUGS language

Marc Kéry and **Michael Schaub** are population ecologists with the Swiss Ornithological Institute. Together, they have authored over 120 peer-reviewed journal articles on a wide range of topics, including the analysis of large-scale monitoring programs, demographic population analyses, experimental design for animal and plant surveys, and the population ecology of rare species, as well as *Introduction to WinBUGS for Ecologists* (Academic Press, 2010).



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Peacock butterfly *Inachis io*, Switzerland, 2001, T. Marent.



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