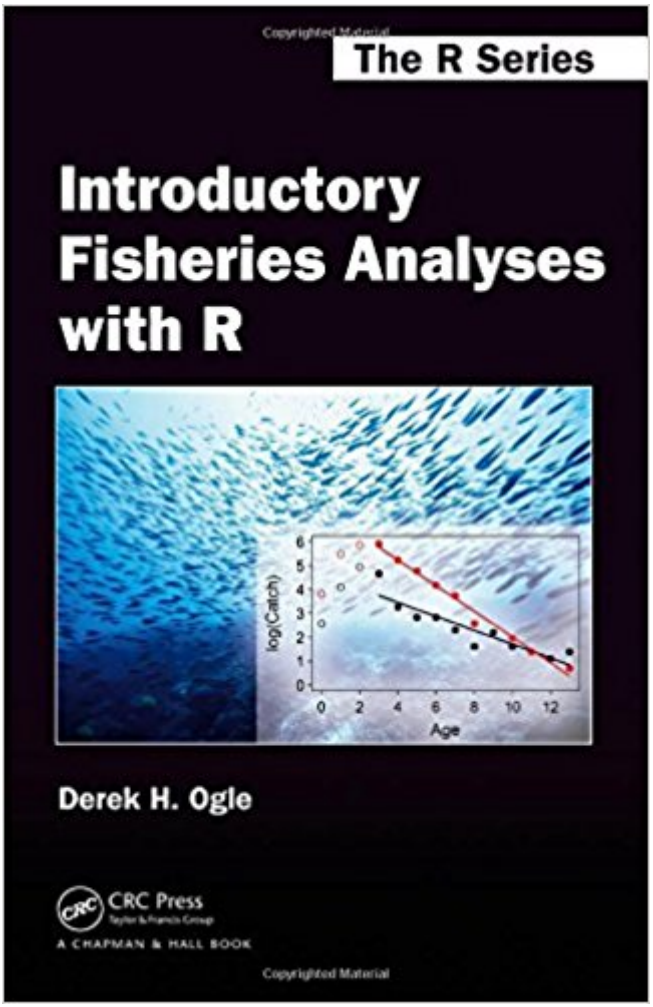
Introductory Fisheries Analyses With R (Chapman & Hall/CRC The R Series)



Synopsis

A How-To Guide for Conducting Common Fisheries-Related Analyses in R Introductory Fisheries Analyses with R provides detailed instructions on performing basic fisheries stock assessment analyses in the R environment. Accessible to practicing fisheries scientists as well as advanced undergraduate and graduate students, the book demonstrates the flexibility and power of R, offers insight into the reproducibility of script-based analyses, and shows how the use of R leads to more efficient and productive work in fisheries science. The first three chapters present a minimal introduction to the R environment that builds a foundation for the fisheries-specific analyses in the remainder of the book. These chapters help you become familiar with R for basic fisheries analyses and graphics. Subsequent chapters focus on methods to analyze age comparisons, age-length keys, size structure, weight-length relationships, condition, abundance (from capture-recapture and depletion data), mortality rates, individual growth, and the stock-recruit relationship. The fundamental statistical methods of linear regression, analysis of variance (ANOVA), and nonlinear regression are demonstrated within the contexts of these common fisheries analyses. For each analysis, the author completely explains the R functions and provides sufficient background information so that you can confidently implement each method. Web ResourceThe authorâ ™s website at http://derekogle.com/IFAR/ includes the data files and R code for each chapter, enabling you to reproduce the results in the book as well as create your own scripts. The site also offers supplemental code for more advanced analyses and practice exercises for every chapter.

Book Information

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Customer Reviews

Derek H. Ogle is a professor of mathematical sciences and natural resources at Northland College, where he teaches statistics and fisheries science courses and has received awards for teaching, scholarly work, service, and assessment activities. Dr. Ogle maintains the fishR website, which is dedicated to sharing information on how to perform fisheries analyses in R. He earned a PhD in fisheries science from the University of Minnesota. His research interests include the population dynamics of invasive species and little-studied native species.

Awesome book for anyone looking to get into R for their fisheries research. Something of a niche market I know, but for those of us studying fish, and fisheries biology, Derek has put together a really helpful book. the FSA package has all sorts of useful functions, but this book also make use of many other time saving functions I did not know about before. The age and growth, and total mortality chapters were most helpful for me, but I hope to work through all the exercises available. Check it out fish people!

Microarrays Using R and Bioconductor, Second Edition (Chapman & Hall/CRC Mathematical and Computational Biology) Design of Experiments: An Introduction Based on Linear Models (Chapman & Hall/CRC Texts in Statistical Science) Introduction to Computational Biology: Maps, Sequences and Genomes (Chapman & Hall/CRC Interdisciplinary Statistics) Linear Models with R, Second Edition (Chapman & Hall/CRC Texts in Statistical Science) Generalized Linear Models, Second Edition (Chapman & Hall/CRC Monographs on Statistics & Applied Probability)