BOOK REVIEW

INTRODUCTORY FISHERIES ANALYSES WITH R. Edited by D. H. Ogle. 317 pp. Published by CRC Press, Boca Raton, FL, U.S.A., 2015. Price £42.49. ISBN: 978-1-4822-3520-3.

This book is nestled within the *The R Series* which aims to support applications of this relatively new programming language and software environment to specific disciplines, to advance the study of statistical methodology and to advance the development of R itself. I must declare a long-standing personal association with the book's author Derek Ogle, hatched some years ago over our joint interest in an invasive fish species but fostered more recently by his enthusiasm for quantitative fish and fisheries biology and ecology. As the book title indicates, this particular member of the series is aimed directly at the fisheries research and education community, although as always such focus also delivers utility for wider non-fisheries fish enthusiasts. For those completely unfamiliar with R, it may come as a surprise to learn that it is driven not by the otherwise ubiquitous 'point and click' approach of most current software, but by a command line interface which at first sight can be quite intimidating. However, this nature also lies behind much of R's strength of being highly suited to bespoke development to tackle specialized analyses for particular purposes. Moreover, R's popularity is now such that someone somewhere has probably already written the script to perform that tricky and/or tedious analysis that non-users are likely to be doing 'manually' through spreadsheets or other means. The learning curve of R is steep, but it is worth it. R is also free.

Aware that a certain degree of R evangelism is still needed, Chapter 1 presents an introduction to R basics which includes a brief consideration of its value to fisheries scientists and leads the novice clearly through software installation and very first steps. This involves learning a new vocabulary, but there is also a useful section on getting help if things get too confusing. Chapters 2 and 3 then address the fundamental R procedures of loading and manipulating data, which in my limited experience of R can often be the most time-consuming component of an analysis, and the fundamentals of plotting various forms of graphic outputs. The remainder of the main text occupying Chapters 4–13 then gets into the fishy heart of things with considerations of age comparisons, age–length keys, size structure, weight–length relationships, condition, abundance from capture–recapture data, abundance from depletion data, mortality rates, individual growth and recruitment. Each chapter presents a general introduction to the fundamental biology and mathematics of its subject before going into the R specifics. Each chapter is also liberally peppered with references to the primary literature which are presented near the end of the book in a single reference list, followed by indices for subject, demonstrated R functions, mentioned R functions and species. The book is also supported by a companion website (http://derekogle.com/IFAR/) which

hosts information on the book (and its purchase), supplements, exercises, scripts and other useful information.

A programming book of this kind has a great potential to bore to death or scare the living daylights out of many fish, researchers and students, but the author has admirably avoided this trap. In all seriousness, even if one completely ignored the R content a read through this book gives a very enjoyable and insightful overview of much of the current world of quantitative fish and fisheries ecology. To have this authoritative overview laced with R applications makes it one of my favourite books of recent years. I can thoroughly recommend it to all researchers, educators and students who want to enter or brush up on the exciting and invaluable world of R.

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