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Book reviews

Quantitative Fisheries Stock Assessment: Choice, Dynamics and Uncertainty
R. Hilborn and C.J. Walters
Chapman & Hall, London, 1992
ISBN 0-412-02271-0, £38.00, $29.95
Hard cover, pp. xv + 570, 57 tables, 170 figures
Contains an IBM format 5¼-inch 1.2 Mbyte floppy disc with 199 files

This book is intended as a textbook and reference for courses in fisheries stock assessment and management. It is aimed at advanced undergraduates or professionals but does not, the authors claim, require advanced calculus or linear algebra. Such claims are common for many textbooks – this is one occasion where I can agree. The contents are divided into four sections: (I) Introduction (i.e. the need for analysis); (II) Behaviour of Fisheries; (III) Estimation of Parameters and (IV) Managing Fisheries. The authors state at the outset that they regard Sections II and IV as the most important and that Section III covers material that is often covered elsewhere. Nevertheless, Section III is by far the largest portion of the book and gives a complete flavour that makes the whole very appealing. What many readers will find poorly represented (as the authors acknowledge) are tropical stock assessment and the analysis of length data.

There is an accompanying IBM 5¼-inch floppy disc containing 199 files organized on a one-subdirectory-per-chapter basis. All the programs are written to run either with QuickBasic (available with MS DOS 5) or with GWBASIC/BASICA (available with MS DOS 4). The vast majority of the files run with QuickBasic; at the time of writing the review I do not have a copy of that program and so cannot comment on the programs on the disc. All the programs, however, are collected by the authors from their own teaching material and should be well tried and tested. The intention has been to provide straightforward programs that work and that can be built upon, rather than highly user-friendly products. The files on the disc may be freely distributed and should provide excellent material for teaching purposes. The documentation on file is succinct and easy to follow. It has been distributed both as Microsoft Word (for DOS) and plain ASCII files.

The main criteria that most readers will use to judge this book are its breadth of coverage of the field and its amenability to the intended audience. Taking the second criterion first, the authors have, in my opinion, produced a very readable book that is clearly laid out and is actually quite enjoyable! The style of writing is not at all formal and there is no belabouring of points or recourse to jargon. There are sufficient tables and figures to be useful, but not an overcluttering. Nor are there the numerous, distracting boxes and asides that seem to bedevil so many modern textbooks. My only quibble, and it is one of taste, is that there are, perhaps, just a few too many rhetorical questions. Are they really necessary? Overall, I think that the book will prove easy to pick up both as a source of ideas and as a manual. The style is accessible to students and professionals alike and also to non-native English speakers.

The material covered is not exhaustive, nor is it very detailed in any one area. The point of the book, though, is not to provide a manual of state-of-the-art assessment methodology. What is provided is a collection of material that clearly distinguishes

between major approaches and gives a good guide to assumptions, weaknesses and potential uses. Associated with this is the disc which contains all of that useful teaching and applicable material. Additionally, and in my opinion more importantly, the book gives a perspective on stock assessment and management that is not provided elsewhere in any textbook that I am aware of, namely that fisheries is about the behaviour of fish and fishermen and that management is about the formulation and analysis of fisheries options under uncertainty. Sections II and IV of the book concentrate on these two areas; they are not exceptionally long and they are not written in a highly technical way. But they do get across the perspective that the authors intend. The ideas put forward are not commonly thought about by many fisheries scientists; perhaps this book will change matters for the better?

There is one homily on page 536 which simply cannot go unmentioned. The authors state as a special warning, placed between lines to give emphasis, "Beware of methods that average sources of information that are contradictory." Such a warning might well seem a trifle trite to many readers. It is far from uncommon practice, however, to fall into such traps and I am aware of more than a few people who will be heartened to see such a warning in clear print.

The general appearance of the book is of a well-produced tome. It is a solid, well-bound document printed on good-quality paper with clear figures and tables. The cover is not particularly inspiring, but at least the bright blue will stand out on the bookshelf. The references are substantial without being excessive. The one part of the book with which I am not happy is the index. At first glance the index appears to be extensive and helpful. But try looking up something to do with recruitment! 'Recruitment' itself has 71 entries and 'Stock-Recruitment Relationship' has a similar number. A more detailed indexing system would be highly welcome.

In summary, this is a very welcome book on fisheries assessment and management. There are more detailed manuals available and there are more detailed books on certain aspects; overall, however, this is an excellent blend of a great deal of material – some practical and some thought-provoking. I am not aware of any other book that could provide a better single text on a fisheries course and I can think of very few that I would rather have on my own shelf. Coupled with the disc, the package, though hardly inexpensive, deserves to be considered seriously as a text for courses on fisheries assessment and management and as reading on more general fisheries/ecology/resource management courses.

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