

Book review

Fisheries techniques. Second edition. Edited by B. R. Murphy and D. W. Willis. Published in 1996 by American Fisheries Society, United States. 732 p. ISBN: 1–888569–00–X. Available from: AFS Publication Fulfillment, P.O. Box 1020, Sewickley, PA 15143, United States. Price: US\$73.00.

The first edition of *Fisheries Techniques*, published by the American Fisheries Society (Nielsen & Johnson 1983) quickly became recognised as the standard text reviewing fisheries methodology. A generation of fisheries researchers began their research careers consulting its pages for sound advice on topics ranging from fish sampling methods to literature searching. Significant advances in the technology associated with the study of fisheries ecology have been made since that first edition was published. The publication of the second edition is therefore a welcome and timely addition to the libraries of fisheries scientists. As stated in its preface, the second edition ambitiously aims to provide a comprehensive introduction to current fisheries methodology that is accessible to a wide audience yet still contains sufficient content to serve as a basic reference for practicing fisheries professionals. The editors, Brian Murphy and David Willis are to be congratulated for achieving their stated aims.

One might be forgiven for thinking that there is little to differentiate the first and second editions with the overall appearance of the second edition changing little compared with the first edition. The cover design remains virtually unaltered and many of the original chapter titles have been retained. A closer examination reveals however, considerable revision. The second edition is considerably longer, consisting of 732 p. compared with 468 p. in the first edition. Four of the original chapters (Fish Kill Investigations; References Collections and Faunal Survey; Economic Considerations for Fisheries Managers; and Finding Literature and Reports) have either been dropped or incorporated into new or remaining chapters. Two new chapters, Data Management and Statistical Techniques and a

second entitled Invertebrates have been added. Most of the remaining chapters have been substantially rewritten. Together, the new chapters plus chapter revisions successfully reflect the developments that have occurred in the field over the past decade. A comprehensive glossary of terms has also been added with the aim of improving the book's value as a teaching tool.

The second edition of *Fisheries Techniques* consists of 22 individual or multi-authored chapters. Chapters 1–4 examine pre-data collection considerations including planning for sampling, data management and statistical analysis, safety, and aquatic habitat measurements. Chapters 5–10 cover field techniques including the care and handling of sampled fish, passive and active capture methods, electrofishing, sampling eggs and larvae, sampling with toxicants, fish marking and tagging, and invertebrate sampling. Remote sampling techniques including acoustic and underwater survey techniques, and biotelemetry are covered in Chapters 13, 18, and 19. Chapters 14 through to 17 review measurements that may be derived from fish including field examination of fish, measurement of length, weight and associated structural indices, determination of age and growth, and quantitative description of diet. The final three chapters (20–21) discuss assessments of recreational and commercial aspects of fisheries. Overall, the book provides excellent coverage of most commonly used approaches and techniques in fisheries research.

Each chapter provides a description of various approaches and techniques accompanied by a review of applications, advantages and limitations. Where applicable, clear line drawings or black and white photographs illustrate equipment and methods. Detailed examination of the use of each technique is not generally provided, however the generous citation of references throughout will provide the reader with many excellent leads into the literature. The reader is encouraged to follow those leads, a point that is emphasised in the preface. *Fisheries Techniques* is an introduction to fisheries research techniques and does not set out to provide an in-depth review and critique of every technique that might ever be used.

Fisheries Techniques has an obvious North American bias throughout, a fact not surprising considering it is a publication of the American Fisheries Society. New Zealand fisheries researchers will however find much of value throughout the book. The various techniques reviewed can be applied to a wide range of systems and species, including the range of conditions likely to be encountered in New Zealand waters. I can confidently recommend the second edition of Fisheries Techniques to the novice, the old hand, and all those in between. Those new to the game will find that Fisheries Techniques provides them with a readable and comprehensive introduction to the range of techniques that they are likely to

require. For the old hand, the abundance of information provided will serve to remind that there is always something new to learn. For the rest of us in between, it will simply become an indispensable and much used reference.

REFERENCES

- Nielsen, L. A.; Johnson, D. L. 1983: Fisheries techniques. Bethesda, Maryland, United States, American Fisheries Society. 468 p.

GERARD P. CLOSS
Department of Zoology
University of Otago
P. O. Box 56
Dunedin, New Zealand