contributors there will be a range of styles, as also there will be some overlapping of content and restatement of ideas. It is also inevitable that some of these ideas and data will have already been published elsewhere. There are differing levels of complexity between some of the chapters but this should not detract from the praiseworthy concept of the book in attempting to bring together the disciplines of population genetics and fishery management.

Many of the contributions are orientated towards anadromous salmonid fisheries as it is these fish, with their life history of migrating back to specific spawning sites and their high market values, that are of great interest to both geneticist and fisherman; the greatest practical applications of genetics and fisheries management in the temperate Northern Hemisphere lie with these species.

The book is written from a strong conservationist viewpoint and continually recommends the need for genetical identification of stocks to be carried out before management practices are implemented. Whilst being highly laudable is it economically and practically feasible? Existing evidence suggests that in some instances the geneticist may already be too late and that the pressures on managers to try to preserve or enhance fisheries in the short term may not make allowance for the establishment of genetic identities and their integration into hatchery practices. Nevertheless if the book prevents future fisheries managers from gross genetic malpractices it will have achieved its objective. I hope it is successful and would recommend it to any aspiring fisheries biologist.

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Methods in yeast genetics: A laboratory course manual. Fred Sherman, Gerald R. Fink & James B. Hicks (eds). Cold Spring Harbor Laboratory, Cold Spring Harbor, New York. 1986. Pp. 186. Price $25.00 U.S. ISBN 0 87969 197 2.

This volume is the course manual for the latest of the specialist yeast laboratory courses run at Cold Spring Harbor from time to time. As such, there is considerable overlap with the manuals of previous courses that have been published, one of which this reviewer has to hand is that by the same editorial team published in 1981. Compared with the earlier version, the number of experiments has been reduced from twenty-three to fourteen. Those experiments on formal genetics are essentially unchanged, unless they have been deleted altogether. The section on yeast transformation is expanded and updated, and totally new experiments are included on chromosomal assignment by 2μ tester strains and on the separation of individual chromosomes by orthogonal field agarose gel electrophoresis.

Detailed protocols are included for many aspects of yeast genetics. The editors do point out that some have been simplified for the purposes of their course, but full references are given to the original research protocols where these differ.

Although a course manual, this book does provide sufficient detail for anyone to carry out the experiments elsewhere. Sources of strains, equipment, specialist chemicals, etc. are all fully documented. An encyclopaedic work on yeast research methods this book is not. However, the methods it contains do provide an entry to yeast research—a starting point for someone new to research, or a bridge for someone already in the field but needing to cross the taxonomic boundary with recombinant DNA techniques.

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The theory of plant breeding (2nd edition). Oliver Mayo. Clarendon Press, Oxford. 1987. Pp xiii+ 334. Price £15.00 PB, £30.00 HB. ISBN 0 19 854171 6 PB, 0 19 854172 4 HB.

The new edition of the *Theory of plant breeding*, like the earlier version is very much concerned with the pure science of population and quantitative genetics as it may be applied to the technology of plant breeding. Will the plant breeder reading this book be able to apply the theory, so succinctly expanded, to the elucidation of his problems? The short answer is no. He would require to be very well versed in mathematics to comprehend the theory and envisage its possible practical application.

This book is very much the author's view of population genetics and how he sees that it impinges on breeding. As such it is better directed to the population geneticist for it identifies many real life problems which justify further theoretical consideration.

This second edition has been written to take account of the progress made in both theory and practice in some areas in the last 7 years. These are, the chapters on variation, molecular genetics and the breeding of perennial crops. The improvements are however, not restricted to these chapters for much more extensive coverage and cross-referencing appears than in the previous edition.

The chapter on variation and its maintenance has been rewritten to take account of recent new work, but the few new references appearing add little to the original. Where the chapter has improved however, is in the clarification of some of the theory, such as that concerned with heterozygosity in inbreeding organisms.

The prospects of genetic engineering allowing the breeder to produce new plants with ease and alacrity is still a long way off. Indeed, some might say further even than it was held to be at the time of publication of the first edition! Whilst the prospects are briefly considered where this rewrite gains is in putting the developments in DNA manipulation into a population genetic context.