

## Book Review

### Abalone of the World: Biology, Fisheries and Culture

Edited by S.A. Shepherd, M.J. Tegner and S.A. Guzman del Proo

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Although this book originated from the First International Symposium on Abalone Biology, which was held in La Paz, Mexico in 1989, it is far more than a collection of symposium papers. The symposium papers are included in the volume but, in addition to this, the editors solicited review articles on several of the more important aspects of abalone biology. One of the most attractive features of the book is the skilful way in which the editors have managed to cover a very broad range of subject material whilst at the same time treating individual topics in sufficient depth to satisfy specialists.

The book is divided into nine sections, each containing 3–10 chapters. Although this has resulted in some duplication of information, the presentation makes it very easy for the reader to locate specific types of information.

The first section deals with the evolution, distribution and genetics of abalone. Whilst distribution and evolution seem obvious starting points, the section on genetics contains results of some of the most recent research on abalone. It may have been more appropriate to include this later in the book, perhaps together with the section on abalone farming where genetic manipulation could be of immense importance.

The second section, on physiology and reproduction, is a little disappointing, lacking a really coherent theme or an adequate review article. It appears to be a collection of vaguely related symposium papers which are placed together merely for a lack of another place to put them. Considering the importance of physiology and reproduction to fisheries, conservation

and farming, it seems obvious that this section should have merited a top-class review article.

Part 3 deals with larval ecology and settlement and is superb, particularly the chapter by Daniel Morse on the molecular mechanisms that control metamorphosis and recruitment. The review article by Paul McShane, on the early life history of abalone, is also well written and very informative.

Section 4 of the book deals with feeding and growth, concentrating mainly on feeding in the natural environment, with little said about feeding of farmed animals. Since the editors admit that abalone farming is likely to increase in importance in the future, more discussion of feeding regimes on farms would have been useful. A similar comment could be made of the next section, on abalone diseases. The specific diseases dealt with in the four chapters are of great interest, but the section in no way attempts to cover all possible diseases of either farmed abalone or those from wild stocks. This section leads fairly logically to the next which deals with stock assessment, estimation of mortality and models used in fisheries biology.

A very interesting section of the book is that which reports on specific case studies of abalone fisheries, and covers many of the world's most important fisheries. In several cases the reports are somewhat disturbing, describing situations of over-exploitation. Others seem to hold hope for the future and demonstrate that strict control measures may pay off. A question asked for many years relates to the feasibility of enhancing natural stocks with introductions from hatchery-reared animals. Although this is a very controversial concept which, to date, has not yielded unequivocal results, the three chapters in this section are well written and thought provoking.

The final ten chapters deal with abalone farming. The book was not intended to be a farming manual, but this section contains much information of interest to farmers. Case studies and statistics of regional farming practices are fascinating and descriptions of some of the farming systems are very informative. Reviews of systems used in New Zealand, California and China reveal many similarities and many differences.

Overall, *Abalone of the World* ranges widely over many different subjects but manages to avoid the trap of superficiality. It will appeal to a wide range of readers with interests as diverse as fisheries management, conservation and abalone farming.

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