for example, will be quite foreign to anyone experienced in this rather specialized field, and the description of sturgeon farming in the USSR hardly does justice to this highly successful enterprise.

For the commercial reader the book has much to offer, since it is written partly in the style of an instruction manual. Again, the specialist will want more information than is contained in the present volume, but it does set out clearly the practices, and some of the statistics, of marine and freshwater cultivation in a variety of countries and under diverse social and economic constraints.

In conclusion, this is a welcome addition to the growing library on aquaculture. It is the most comprehensive book of its kind and is written in a clear style which will appeal to laymen as well as to professionals within the field. The main fault is the absence of critical appraisal which perhaps is inevitable in such a comprehensive work based more on personal interviews than on published scientific work.

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R. W. Edwards and D. J. Garrod (Eds.): Conservation and Productivity of Natural Waters. Symp. Zool. Soc. Lond., (29), 1972, 318 pp.

This book contains the proceedings of a symposium held in London in October 1970. Unlike many symposia the papers are nearly all relevant to the title of the book. They are divided equally between fresh water and marine topics. The former include papers on rivers and lakes and cover subjects from nutrient inputs to fish production. Of particular interest are two papers on potential applications of fresh water research. Steel suggests that in reservoirs affected by excess algal production, the control of vertical mixing using inlet jets could produce a decreased primary production rate and lead to a balance between algae and herbivores. This might provide an alternative or an addition to chemical treatment. Alabaster et al. discuss the usefulness of short-term toxicity tests in relation to pollution of rivers. They suggest that combined effects are largely calculable from tests with individual poisons. Further, they demonstrate an empirical relation between these results and the presence or absence of fish in rivers in the Midlands of England. In this way the relatively simple short-term tests may have predictive value.

The marine papers cover a similar spectrum from plankton to fish. Colebrook describes the linear de-

crease with time in a number of zooplankton species in the North Sea. However, these changes over the last 22 years have not been linked convincingly with climatic change nor would it be possible to differentiate between these natural changes and any cumultative effects of pollution. For another North Sea problem, the preservation of nursery grounds in the Dutch Waddensea, Zijlstra describes the surveys which have demonstrated the general importance of this area for plaice and sole. Thus a partial closure by dykes could have a significant effect on recruitment to these fish stocks, but this cannot be quantified at present.

This conjunction of fresh water and marine papers illustrates not merely the difference in scale of the problems but also the consequent difficulties in application of results in the marine field, particularly in relation to some of the more recent types of human activity. It is valuable to have such comparisons available in one volume.

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Gabriel Godin: The Analysis of Tides. University of Toronto Press / Liverpool University Press, 1972. 260 pp., £ 14.00.

The title of this beautifully prepared book may perhaps convey the wrong impression. The prospective purchaser should not expect to find a point by point account of how to perform various types of tidal analysis, instead the reader is presented with a very useful collection of information on the underlying theories of the various tidal analysis methods.

Two chapters serve to prepare one for the main bulk of the book. The first, an introduction, starts with such fundamentals as Newton's laws of motion, celestial motion and various types of clocks and calendars and develops the concept of tidal potential and its treatment by various workers. The second chapter entitled Basic Mathematical Notions deals with such concepts as Fourier series and Fourier transforms and then develops into a discussion of the spectrum of a function. The problems of aliasing and of resolving adjacent spectral lines from a finite length, discretely sampled time series are studied before an extended treatment of filtering is undertaken.

The remainder of this chapter concerns itself with power spectra and cross spectra and the effects on these of noise, trends and steps in the original data series. These introductory chapters do their job of acquainting the "novice" with the basic terminology