

## BOOK REVIEW

'THE GLOBAL CLIMATE SYSTEM: PATTERNS PROCESSES AND TELECONNECTIONS', Howard Bridgman and John E. Oliver. Cambridge University Press ISBN 052182642X (Hardback)

Since the year 2000 about 30 books have been published in English that are climate related: 'The Global Climate System' by Bridgman and Oliver list nearly 100 with the earliest published in 1975, but most of them after 1990. Some of these books are highly specialized; some are text books of one kind or another. Hence one may ask: why another book on climate? What is so special about this one that I should buy and read it?

Bridgman's and Oliver's product can best be described by what it is not: It is not a textbook. No, not really. Rather it is a composition of basic information, thoughts and reflections combined with a very welcome compilation of information sources (including a large number of relevant WebPages and data sources plus a very good bibliography of numerous specialist articles) on the hugely complex climate system, some of its processes, its variability and effects on society. The volume covers a wide range of topics relevant to climate science. A very brief introduction provides some of the basics necessary to understand the energetics of the climate system and the concept of teleconnections. Chapters on tropical, mid-latitude and polar climates follow. Noninstrumental data of climate variation are discussed as well as the effect of cities on climate and the response of societies to climate variability. The last but one chapter as a whole contains a very thoughtful essay by William Lau on the usefulness of climate models discussed by the example of the Asian monsoon.

The subtitle of the book is: 'Patterns, Processes and Teleconnections' and, hence, the reader would expect an in-depth discussion of these. However, disappointment is around the corner since only selected processes and features are discussed in detail. So in the 'Oscillations and Teleconnections' chapter the most important teleconnections are introduced briefly, but only the El Niño/Southern oscillation phenomenon is worked out in detail. While certainly the El Niño is one of the most important and best studied phenomena of climate variability, other important and currently much discussed phenomena like the North Atlantic oscillation (which is unnecessarily separated from the related Arctic Oscillation by several pages) receive much less attention. Such is the style of the whole book: the balance of information is

not maintained. While this is certainly one possible way to tackle the complexity of the subject without publishing a ten-volume edition, it might not be what the reader expects and he or she will have to purchase the other nine volumes elsewhere. However, it is of interest reading these reflections and the reviewer was repeatedly forced to rethink about what was thought to be solved problems. Unfortunately, at places there are quite loose formulations like 'heat budget' instead of 'energy budget'. In the urban climate chapter misleadingly and repeatedly it is stated that enhanced concentration of particles from the urban sources would lead to enhanced precipitation. The opposite is the more common as a large number of recent studies have shown. Sadly there are more of such instances.

The editor-authors avoid any mathematical formulations and remain descriptive throughout, making the book readable also to the layman at first glance. However, laymen may not be acquainted with many of the technical terms that are being used without explanation. Not only laymen will have problems with the extensive use of abbreviations throughout and the four page glossary of abbreviations at the front of the book will be worn very soon. Besides that, the many – one per chapter sometimes split into two parts – 'essays' interrupting the descriptive basic text, again interrupted by 'background boxes' and 'tables' of varying content (some of more and some of less use) make the book hard to read after a hard day's work. One needs training to find out the beauty and one should not attempt to read the book in one run. The problem is that the depth and quality of information vary a lot. Many figures are included, but these also are of differing quality, as are the so-called essays. Some of them are really stand-alone texts and good to read, some are just used as parts of a chapter and one would not think they are essays were they not printed over a grey background.

To cut a long story short: the book contains several good ideas and also solid information, which could make it special, but this is overlaid by the unbalanced presentation.

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