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not mean that we did not consider it important, nor can it be concluded that inclusion in the list of references puts a paper into the "very important" category. Our approach to the vexed question of references in elementary textbooks is that we follow accepted procedures and generally acknowledge sources of figures, preferring those which highlight the essentials of a situation to those with more detail or priority of thought. Beyond that, we restrict documentation with references to those parts of the text where new information leads us to modify or contradict earlier work. Where reference is not made to the original source it can always be found by following up the references given in the quoted literature.

A substantial part of this book was prepared while one of us (M.T.) was on study leave at the Institut für Meereskunde an der Universität Kiel. The hospitality and facilities of that institution are gratefully acknowledged. Various colleagues from Kiel commented on early drafts of the text, particularly the chapters on the Southern and Atlantic Oceans. We thank in particular Ray Peterson, Lothar Stramma, and Walter Zenk for helpful suggestions. We are indebted to Birgit Klein for information from her work not published at the time. Among our Sydney colleagues we thank John Luick for his attentive reading of early drafts. Janet Sprintall prepared most of the computer-generated figures, and she and You Yuzhu gave us generous access to work in progress at the time. Cesar Villanoy provided valuable assistance with chapter 13 and assisted in the preparation of many computer-generated figures. Brenda Durie skilfully converted the GEBCO topography into the topographic charts of this book. Drafting staff at Pergamon Press guaranteed high standards by preparing most figures from our often rough drafts. At Flinders University, Gail Jackson drafted many figures with never-flinching dedication to highest figure standards; without her help this book would not have gone through the printer's presses for another twelve months.

The *Oceanographic Literature Review* section of Deep-Sea Research proved invaluable during the preparation of this book, and we express our sincere appreciation to the people behind this excellent research tool.

Finally, we note a few things which regrettably did not get the attention they deserve. Much can be learned about the oceanic circulation and the life cycle of the various water masses by combining information from CTD and current meter data with information on oxygen, nutrients, and other chemical tracers. Unfortunately marine chemistry has always been among the authors' weak points, and the treatment of the chemical tracers in this book is below acceptable level - it cannot even be called elementary. Should this text prove its usefulness with students and lecturers, to the extent that a revised edition seems justified, a first improvement should be proper coverage of the distribution of all major chemical tracers in the world ocean. Also, our text is clearly a product of what is known as the "Western World": It is based nearly exclusively on research reported in English and published in North America or Europe. While there is no need for apologies in that respect, it is true that in a field such as regional oceanography significant research is sometimes reported in a journal published closer to the regions of interest. It is likely that more accurate descriptions of the oceanography particularly of some of the marginal seas exist in Japanese, Russian, Chinese, or other languages. We welcome the assistance of oceanographers who know of such descriptions and communicate relevant information to us.

Adelaide and Hobart, May 1993
Matthias Tomczak

J. Stuart Godfrey

which makes it possible to use the illustrations for teaching in the classroom. The high resolution is also the prerequisite for good print output. In most situations the print quality is limited only by the printer resolution. Colour laser printers will produce output that comes very close to true book quality.

High resolution comes at the price of large file size. This suggests that the book should be stored on CD and used from the CD, whether it is for private study or for classroom use. To keep download times within reasonable limits each chapter is stored on the web in its own file. Most files are about 1 – 4 MB in size.

The fluidity of the web medium requires good documentation of changes to the book. A pdf version history is therefore an integral part of any printout. The current version is indicated at the bottom of every page. In addition, a complete version history is included on the inside back cover.

Finally a few remarks about use of the text in class. My own experience covers a second year undergraduate course and supervision of graduate students. The graduate students find the book valuable as a reference. The structure of the book, which presents each major ocean as a distinct section of the text, is quite appropriate for this kind of use. It is not so well suited for undergraduate teaching, where time, level of student interest and depth of enquiry are insufficient to go through a detailed discussion of every ocean.

From my years of teaching second year classes I found that a presentation based on physical processes rather than geography is more appropriate to keep the students interested. In other words, rather than dividing the presentation into Pacific, Atlantic and Indian Ocean I divide it into integrated flow, equatorial current system, western boundary currents, and eastern boundary currents and discuss all three oceans in each section together. The next major reworking of the text will probably be based on such a structure.

Adelaide,
December 2001

Matthias Tomczak