
Preface

The purpose of this book is to provide timely and comprehensive information on extant planktic foraminifers. This book is based on 'Modern Planktonic Foraminifera' published by Hemleben et al. (1989). An extensive amount of literature published over the past 26 years adds new information on modern and fossil planktic foraminifers and merits an update of the current knowledge. New chapters review the modern advances on stable isotope geochemistry, element ratios of planktic foraminifer tests, and molecular genetics of planktic foraminifers, the latter being an entirely new field of research developed since the mid-1990s. As a practical guide for students and colleagues, the book provides 35 plates on the classification of the extant morphotypes, most of which include various genotypes. A vast amount of new knowledge on planktic foraminifer ecology, settling dynamics, and carbonate geochemistry is presented over several chapters. Much less new information has been produced on the ultrastructure, ontogeny, and nutrition. In these cases, parts of the book of Hemleben et al. (1989) were rewritten, summarized, or complemented. Finally, we present the current state of the rapidly increasing methodological and technological advances available to our field of research.

This book is meant to provide a tool and new perspective for the application of planktic foraminifers in paleoceanography and climate research, as well as in eco-monitoring, for example, in offshore hydrocarbon prospection and exploitation. This volume presents a review of the recent findings and includes thus far published and unpublished findings of the authors. As much as we have aimed for completeness, we may have missed some papers published over the past decades. Although Internet-based sources have improved awareness, distribution, and accessibility of information, the vast amount of new literature published in the increasingly large number of journals has magnified the challenge of being thoroughly complete.

Reference

Hemleben C, Spindler M, Anderson OR (1989) *Modern planktonic Foraminifera*. Springer, Berlin

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Schiebel, R.; Hemleben, C.

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