

important biological features that are closely associated with the activity rhythm.

Although more detailed reconstruction of prosimian evolution will depend on synthesis of information from a wider range of biological disciplines, this book clearly demonstrates that detailed study of behavioral and ecological relationships can yield information of great significance for interpreting both the anatomical characteristics of extant species and past evolutionary trends. Although on first sight it might appear to be of interest only to the behavioral primatologist, the book has a far wider appeal. It is a model of behavioral ecology and as such will be welcomed by those interested in the interaction between animals and their environment.

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Forams

Recent Foraminifera. ESTEBAN BOLTOVSKOY and RAMIL WRIGHT. Junk, The Hague, 1976. xviii, 516 pp., illus. Dfl. 125. Revision of *Los Foraminiferos Recientes*.

By virtue of their common occurrence in all marine environments—past and present—the shells of foraminifera have been utilized as stratigraphic and paleoecologic tools in petroleum exploration and, more recently, in the analysis of hundreds of Cenozoic and late Mesozoic sediment cores raised from the ocean basins by the Deep Sea Drilling Project. A foraminiferal organism may be considered to carry a paleobiological message within its shell that awaits decoding by the micropaleontologist, ecologist, cytologist, geochemist, and biochemist.

The results of investigations of Recent foraminifera from these diverse points of view are the subject of Boltovskoy and Wright's timely work, which fills a near-vacuum that exists in this field. Neither a treatise nor a textbook, it is rather a compendium, truly international in scope, of an astonishingly large number (1686) of publications.

The authors succeed in presenting an integrative summary of the burgeoning but widely scattered literature stemming from modern research on both planktonic and benthic foraminifera. They have brought together isolated observations and ideas under a series of wide-ranging headings, albeit the arrangement

is somewhat illogical. The chapters on sample collection and preparation are replete with a vast array of gear and methods, some of historical interest but bewildering to the initiate who is seeking a "standard" instrument or procedure.

The abundance and diversity of benthic foraminifera are clearly apparent from their occurrence in the entire spectrum of marine environments. Many species exhibit a wide range of morphological variability in response to a host of environmental factors, such as temperature, salinity, depth, food, substrate, and pH. The lack of agreement among contemporary workers on a single, world-wide depth zonation also reflects the complex interaction between highly diverse foraminiferal faunas and variable bottom conditions and substrates. Boltovskoy and Wright present tables of generalized depth distribution for 81 genera and of substrate preferences for 68 species, a bold attempt toward a synthesis.

The horizontal and vertical distributions of planktonic foraminifera are discussed succinctly, but the discussion suffers somewhat from a lack of critical assessment. Five schemes of biogeographic zonation are presented without evaluation. The importance of calcium carbonate and foraminiferal solubility on the deep-sea floor is obscured by the listing of incidental descriptive papers, which should have been replaced by a physical-chemical explanation.

Of particular interest are the many new and "forgotten" aspects of the living organism, its cytology, life cycle, symbiotic algae, shell structure and morphological variability, and chemical composition. A surprising omission in the encyclopedic coverage is that of a taxonomic scheme and criteria for identifying the major foraminiferal families and genera, with illustrations of at least the common species. Such information would have been helpful to beginning as well as advanced students in that the reader of the book would not be required to have prior knowledge of foraminiferal classification.

One might criticize some misspellings, omissions of references, the lack of evaluation, and occasional misinterpretations of published results. However, these defects are far outweighed by Boltovskoy and Wright's paramount success in synthesizing the problems and concepts in the mainstream of foraminiferal research.

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