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Review of: "A Sea Without Fish: Life in the Ordovician Sea of the Cincinnati Region."

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David L. Meyer and Richard Arnold Davis. *A Sea Without Fish: Life in the Ordovician Sea of the Cincinnati Region*. Bloomington & Indianapolis: Indiana University Press, 2009. xv + 346 pp. Preface, acknowledgments, repositories of fossils illustrated in this book, appendices, glossary, references cited, and index. Hb. $44.95.

Paleontology is all about roots. *A Sea Without Fish* is an excellent example of how the history of a discipline and the history of life in the Cincinnati area come together to provide a fascinating, clear understanding about how our knowledge of the fossils of the region has evolved.

The book opens with a series of biographical sketches of the amateur and professional paleontologists of the 19th and early 20th centuries who first

attracted attention to the Ordovician fossils of southwestern Ohio and who formed the framework for the identification and classification of the fossils. We remember several of the early students of the region as the giants of paleontology and stratigraphy, teaching students at leading universities and forming an academic lineage that are recognizable today. As is still the case, the paleontology of the Cincinnati region is much richer because of the close interaction between amateur and professional paleontologists. Biographical sketches detail this association.

The authors explore the roots of our current understanding of the stratigraphy of the area and provide the reader with an understanding of how terminology has changed over the years. Because of this historical treatment, it is possible to understand the relationships among otherwise confusing rock names. This is a particularly interesting and important feature of the book because it will serve as a guide to the earlier literature of the region.

The main body of the text is devoted to a survey of the groups of organisms preserved in rocks. Again, the story takes us back to the roots of the so-called Paleozoic Fauna, which was to dominate the marine world for nearly 250 million years and whose descendents still alive in the oceans of the world today. Each of the chapters outlining fossil groups begins with a brief overview of the anatomy of the organisms followed by a discussion and illustrations of some of the characteristic Cincinnatian fossils. The skillfully balanced level of presentation is such amateur and professional paleontologists alike will be able to read, enjoy, and learn from the text. The illustrations of fossils are excellent. Within the section dealing with the fossils, there is a color inset of figures depicting the geography of the globe during the Ordovician as well as modern and ancient animals. These illustrations provide a touchstone to relate ancient geography and biology to the modern world.

Following the sections dealing with fossil groups, all the preceding material integrates into a description of the paleoenvironmental and paleogeographical controls on the distribution of fossils in the region. The synthesis is a clear discussion permitting the reader to recognize the relationship between the observed rock record and the environmental setting in which the rocks accumulated and the fossils lived. The authors, including Steven M. Holland in this section, draw clear distinctions between field observations of variation in types of sedimentary rocks and the enclosed fossils, and the manner of information assembly to draw conclusions about the ancient setting. This demonstrated relationship between observed data and synthesis is very often missing in popular treatments; however, it is essential in demonstrating the manner in which geological interpretations are made.

The culmination of the narrative part of the book is a wonderful epilogue in which the authors guide us on a scuba diving experience in the Cincinnatian Sea to visualize further the variation and the diversity of life in the Ordovician as well as to sense the differences between ancient and modern marine life.

This ultimate treat breathes life into the world of rocks and fossils.

One of the features of the book is the clear definition of technical terms within the text or in context. In addition, the book contains an extensive glossary and references to the published work documenting the volume. A list of additional sources of information about the rocks and fossils of the Cincinnati region as well as people and institutions associated with the Cincinnati area is most valuable.

In summary, this is an attractive, well-written, and beautifully illustrated book describing the geology and paleontology of one of the best-known and most fossiliferous regions in the world. The book belongs in the personal library of all those interested in paleontology and in college and university libraries.

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