Book Review


Alan Rubin is a geochemist at the University of California in Los Angeles, and this, his first book, is intended for the popular market. The book is a collection of essays, many previously published in the Griffith Observer.

The purported unifying thread of this book is “gravity,” and its influence on the origin and evolution of the solar system and life, although the span of topics is, in fact, rather broader than this might suggest.

The chapters are somewhat uneven in quality, and, with many having been written separately over a period of 20 years, there is often little in the way of links between them. Nonetheless, it is a very readable collection and the chapter format makes the book easy to dip into.

After some introductory chapters, the book moves on to geophysics history—ice ages, Earth’s magnetism, and the origin of the Moon. The bulk of the book discusses small bodies and their thermal histories, mesosiderites, Meteor Crater, the K-T extinction, tektites, and planetary rings. The book concludes with some up-to-date astrobiological topics on the search for life on Mars, panspermia, on the paucity of aliens, and finally, a rather refreshing discussion on the human response to First Contact. This broad range of topics is sure to have something for everyone.

Some parts of the book (where Rubin explains the science itself) sometimes tend to oversimplify to the point of inaccuracy (e.g. the limiting factor in planetary cooling is the length scale over which thermal conductivity has time to operate, rather than the surface area to volume ratio limiting radiation to space as he implies). However, the book is at its best giving potted histories of aspects of planetary science, such as the understanding of Earth’s magnetic field, or Meteor Crater. I came across numerous interesting anecdotes and vignettes of the scientific process, which Rubin admirably shows to be a sometimes imperfect enterprise. This perhaps is the book’s most important message.

The book ends with a useful glossary, index, and bibliography. The latter lists books almost exclusively, rather than providing references to original papers. While this is a perfectly acceptable approach in a book aimed at the popular market, it does compromise the book’s utility as a starting point for further research.

Overall, the book is an excellent and wide-ranging, and can be heartily recommended for general reading. The book is illustrated with well-reproduced black and white figures, several of which betray the author’s numismatological bent.

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