

Cowen R.: **History of Life**. 3rd Ed. – Blackwell Science, Malden 2000. ISBN 0-632-04444-6. 432 pp., GBP 29.99.

The book is based on the author's expertise in teaching a course "History of Life" for more than 3 decades at the University of California, Davis. While students may be the most frequent readers of the book, it is by far not intended only for them. In fact, anybody interested in the evolution of the Earth and its living organisms, especially animals, will find the content of this book useful and interesting.

The best way how to introduce the content of the book might be by simply enumerating the titles of the chapters: The Origin of Life (Chapter 1), Earth's Earliest Life (2), Sex and Nuclei: Eucaryotes (3), The Evolution of Animals (4), Life in a Changing World (5), Extinction (6), The Early Vertebrates (7), Leaving the Water (8), Amphibians and Reptiles (9), Reptiles and Thermoregulation (10), The Triassic Takeover (11), Dinosaurs (12), Warm-Blooded Dinosaurs? (13), The Evolution of Flight (14), The Origin of Mammals (15), Marine Reptiles (16), Why Flowers are Beautiful (17), The End of Dinosaurs (18), Cenozoic Mammals: Origins, Guilds and Trends (19), Geography and Evolution (20), Primates (21), Evolving Towards Humans (22), The Ice Age (23), Humans and the Ice Age (24). Finally as an Appendix an Invertebrate Paleobiology has been added. The Book ends with a useful Glossary with definitions or explanations of the many terms used throughout the text, followed by an Index.

As seen from the chapter titles, the book concentrates on the evolution of animals. It also provides interesting information on the formation of Solar system and describes the very origin of life.

Each chapter ends with "Review Questions" meant predominantly for the students in order to enable their better preparation for tests and examinations. Each chapter also contains a list of literature which is divided into "Easy Access Reading" and "More Technical Reading".

The book itself "continues" on the World Wide Web site <http://www-geology.ucdavis.edu/~GEL3>, where a lot of further extra reading could be found including more detailed descriptions, recent articles, personal stories, etc. This is an extraordinary valuable part of the book.

For readers of this journal, the description of the evolution of photosynthetic organs and functions would be of most interest. The development of the first autotrophic organisms is described as well as the development of photosynthesis. *Cyanobacteria* and their decisive role in releasing oxygen into the atmosphere are also mentioned. I appreciate the exact description of the endosymbiotic evolution of both plastids and mitochondria. In a similar precise way, the origin of land plants and their principle features have been described. Sometimes, the description seems to be slightly simplistic (e.g. "Carbon dioxide in the atmosphere trapped solar radiation, so Earth's surface was warm." on p. 5).

Generally speaking, I would recommend the book to those readers who would like to gain a basic knowledge on the Earth's evolution accompanied with detailed description of the evolution of animals. They will find brief remarks on plant evolution, where appropriate. However, readers interested in the evolution of plants or specifically in the evolution of photosynthesis during the Earth's history will not find sufficient information.

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