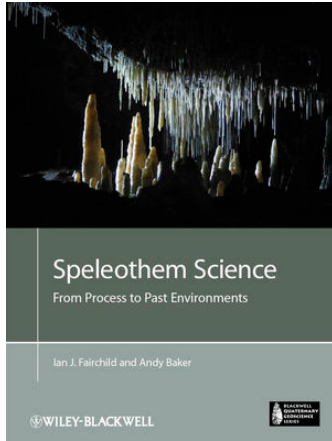


**Ian J. Fairchild and Andy Baker**

**Speleothem Science: From Process to Past Environments**

Wiley Blackwell, 2012. Hardcover, 450 p., ISBN-10: 1405196203, ISBN-13: 978-1405196208, €57



The impressive growth of studies concerning past climatic changes fuelled by the debate on global warming has increased the number of natural archives and proxy data explored for paleoclimate and paleoenvironmental reconstructions. In this framework, for years, speleothem science was relegated to a limited group of researchers, often related to cave exploration and karst geomorphology. The development of new suites of mass spectrometry for U series dating (namely, TIMS and ICP-MS) has made it possible to drastically reduce the amount of material necessary for dating speleothems in a way to make these natural archives very suitable for paleoclimate research on terrestrial environments and for accurate and precise dating of climatic events. In other words, speleothem science entered in a new era. Now the attention to speleothems is not anymore relegated to a limited group of researchers related to traditional karst geomorphology and karst hydrology, and many groups are now widely interested in speleothems as fundamental sources for exploring past climate over the continents.

Despite this increasing number of publications in the panorama of speleothem science, a specifically devoted and complete book was necessary. *Speleothem Science* by Ian J. Fairchild and Andy Baker is a particularly welcome and timely book. Written by two leading authorities in the field, it represents the state of the art in speleothem science, covering from the basic concepts on carbonates rocks to the use of speleothems as multiproxy archives of past climate. The book has a holistic approach and continuous links with other disciplines are present. Some chapters of the book can be useful for Quaternary geologists, geochemists and carbonate geologists and, obviously, paleoclimatologists. The whole book is supported by a generous number of figures and graphs perfectly integrated in the text and any aspect of speleothem science is deeply discussed. Well written, perfectly readable (for the pleasure of non-mother tongue readers) and never boring this book (with on-line supporting material) is not just useful for students but perfect for who wants to be introduced to speleothem science. I wish to recommend this book to students and researchers attracted not only by caves and their archives but also interested in the new frontiers on paleoclimate researches and looking for inspiration of application of new proxies also in environmental geochemistry. I think for anyone of us, a book is important when we can learn from it and it invites you to read and learn more providing access to the most important and updated bibliography on the matter discussed. This is a great book that any paleoclimatologist, geomorphologist and environmental geochemist should have, not in their own library but on the office desk, ready to be read or consulted.

Finally, the price is reasonable and accessible for all pockets. This makes the book of particular interest for all kinds of speleologists interested in improving their knowledge on the wonderful world of caves.

**Gianni Zanchetta (University of Pisa, Italy)**