



## Book Reviews

**Encyclopedia of Caves and Karst Science.**  
*John Gunn (Editor). Published by Fitzroy Dearborn (Taylor and Francis Group, New Fetter Lane, London, EC4P 4EE, and New York). 2004. 902 pages. ISBN 1-57958-399-7.*

This massive compendium was compiled and edited by John Gunn and a team of 14 advisors. These are among the 200 or so contributors, drawn from speleologists and karstologists from all over the World. They have written nearly 400 entries on almost all karst-related topics, ranging from process-oriented topics to regional surveys, from historical reviews to reports on the larger individual cave systems such as Mammoth, Carlsbad–Lechuguilla, Mulu and Hölloch, and comments on archaeological caves and on biospeleology. Entries are arranged alphabetically and most comprise only two or three pages. They follow a pattern of reviewing the state of knowledge of their topic, giving a handful of cited references and a short list of Further Reading. Gypsum and salt karsts are included as well as pseudo-karst on granites, sandstones and other rocks. A few topics get extended treatment, e.g. 15 pages on Groundwater and 18 pages on Speleogenesis. Cave sediments were split between two groups of entries: 6 pages under the heading Sediments, and a further 6 pages under Paleoenvironments.

There are numerous black and white photographs, many diagrams, and a group of eight pages of colour photographs in the centre. Biographical notes on the contributors are provided at the back (with the exception of Peter Huntoon – author of the Grand Canyon entry), and there is a comprehensive index.

Karst sciences in the context of the Encyclopedia include cave archaeology and biospeleology – indeed there are so many entries in the latter category that a geologically minded reader may feel a little frustrated. Some other topics that I would have regarded as marginal to karst science include Limestones as Resources, aspects of limestone use such as road material, and quarry landscaping. Nonetheless, the book

will make an essential reference work for anyone interested in caves and karst for many years to come. It will provide valuable starting points for many graduate theses, as well as providing cribs for undergraduate dissertations.

However, the Encyclopedia has its drawbacks. To start with I looked up a few topics that interest me. Hydrothermal Karst had no entry, though the enormous index directed me to material hidden under Speleogenesis: Deep-seated, and there was more on the subject under Sulfide Minerals in Karst, which was not indexed.

I looked up Sutherland Caves, but there was only a brief note on the archaeological caves near Inchnadamph, hidden in items indexed to Scotland, but not indexed under United Kingdom (presumably because the American index compiler did not know where Scotland is. I had expected some reference to Smoo Cave's vast entrance (second largest in Britain after Peak Cavern), and to the unusual exploitation of a thrust-fault plane by the Cnoc-nan-Uamh cave stream, but this may be a parochial view.

I looked for Lava Caves, but found no specific entry, though the index directed me to the entries on Hawaii Lava Caves and on Volcanic Caves. A surprising omission was anything about the recent studies by Chris Wood and others on Iceland's Laki lavas.

The Peak District entry has overlooked the dolomitized area in the southern part of the White Peak, with its periglacial karstic dolomite tors; the nearby solution collapse structures around Brassington with their fill of Mio-Pliocene sands and clays were dismissed in one line, with the misleading implication that they were Permo-Triassic features. The caverns developed at the dolomite/limestone contact, as at Matlock and in the Golconda Mine near Brassington were overlooked, though these could be regarded as of only parochial interest.

In connection with the drowned tower karst of Ha Long Bay, Vietnam, I looked for comment on the equivalent in the Palau Islands in the western Pacific (seen in David Attenborough's film of jellyfish in a flooded doline) and on the drowned tower karst at Phangnga Bay beside Phuket in Thailand (seen in one of

the James Bond films), but found only the latter tucked away in the entry on Asia, Southeast.

There is an entry on the archaeological caves of Gibraltar, but no mention of St Michael's or other caves high in the Rock – how did these caves or their speleothems develop with their minimal catchment area? The ice-filled Grotte Casteret got only the briefest of mentions, with no discussion of the ice accumulation therein. I found no description of the deeply eroded karst exposed by exploitation of guano on some oceanic islands, such as Niue and Nauru. Perhaps these are indications that an encyclopedia, even of this size, cannot cover the entire world in detail.

I looked for an entry on Tufa but found only one on Travertine. Both appeared in the index with their own long lists of appearances, of which only some overlapped, and sadly the major data on genesis, within the Travertine entry, was not listed among the Tufa

references, nor was the data on tufa formation listed among the Travertine references.

However, these are details that can easily be put right in a second edition in a few years time. The Encyclopedia is a volume that should be on every library shelf where there is any interest in limestones (and other rocks) with their caves and karstic phenomena, archaeology and subterranean biology. John Gunn and his team deserve all possible plaudits for their great effort.

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