

BOOK REVIEWS: SHAPING a NATION A KARST ATLAS of NEW SOUTH WALES

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Shaping a Nation and A Karst Atlas of New South Wales.

Two very different books arrived by various means onto my desk recently. The former is a huge volume produced by huge variety of authors; the latter is the work, with input from many others, of one dedicated man.

Let's deal with the heavy one first – it weighs in at a whopping 4.3 kg! And it's worth every one of 4,300 grams - \$70 plus heaps of postage! The book price is extraordinarily low for a book of this quality of content and production.

First let's look at the publisher's blurb:

Shaping a Nation: A Geology of Australia is the story of a continent's geological evolution as seen through the lens of human impacts. Exploring the geology, resources and landscapes of Australia, the book reveals how these have helped to shape this nation's society, environment and wealth.

Presented in a refreshingly non-linear format, the book summarises much of what we know about this country's geological history, discussing the fossil record and evolution of life across the continent, describing its mineral and energy reserves, and revealing the significance of its coastal and groundwater systems.

The book also explores some of the challenges and opportunities presented by Australia's rich geological heritage, and outlines the issues they present in Australian society today. Based on much of the latest science, the book reveals Australia's expertise in the geosciences and reinforces the vital role they play in informing its present and future development.

In presenting the latest geoscientific knowledge, *Shaping a Nation* is vividly illustrated by technical drawings and figures and accompanied by stunning photography that reveals the extraordinary beauty of Australia's geology and landscapes.

For the avid reader, an accompanying DVD hosts extensive appendices, including supplementary reading and reference material, maps, movies and an interactive 3D model showcasing many geoscience datasets.

At last year's Symposium on Geodiversity, Geological Heritage and Geotourism a number of speakers lamented the quality of the geological material given on cave tours and in interpretive material – a very disappointing state of affairs. And it is true in some

cases. So *Shaping a Nation* is one way to brush up our collective geological knowledge with the superb, easy to digest and very comprehensive volume. It is nothing like a standard geology text with introductory chapters on rock types followed by a descent through time to the present – with maybe a bit of geomorphology thrown in for good measure.

The chapters, each with a bibliography, are as follows:

Australia and the Australian people – describes the peoples, geography, climate, flora and fauna, mineral wealth and Australia's maritime jurisdiction and external territories.

Australia in time and space – discusses the basic geology and evolution of this aged continent.

Living Australia – outlines the palaeontology, flora and fauna – including discussion of the impacts of introduced plants and animals.

Out of Gondwana – elaboration of Australia as part of the Gondwanan Supercontinent and its breakup. The role of the breakup in determining Australia's energy resources is brought out.

Old, flat and red - Australia's distinctive landscape – deals with the age, lack of relief, the thick blanket of weathered rock over much of the continent. It also discusses the impact of man 'over the last 50,000 years, and especially over the last 200 years'.

Living on the edge - waterfront views – Most Australian's live near the coast and the geological evolution of the continent has produced an unusual continental margin. This margin has played major role in the evolution of our modern society.

Groundwater - lifeblood of the continent – explores the development and use (and abuse) of our groundwater in this the driest inhabited continent.

Foundations of wealth – explores our mineral wealth that arose 'as consequence of the large-scale tectonic processes that built Australia.'

Sustaining Australia's wealth - economic growth from a stable base - discusses the history of resource exploitation and its role in our future.

Deep heat - Australia's energy future? – deals with both nuclear, and more extensively, geothermal energy.

Advance Australia Fair – 'This concluding chapter looks briefly at the opportunities and challenges that Australian geology creates for the future of this nation.'

The chapters are followed by an index with an estimated 3,500 entries. Less than 1% of these refer to limestone, karst, lava caves, groundwater dependent ecosystems etc. However limestone landscapes feature in many of the splendid photos which illustrate this handsome volume. As far as I can tell the word 'karst' only appears once in the book – referring to the 345 million year old Jenolan Caves.

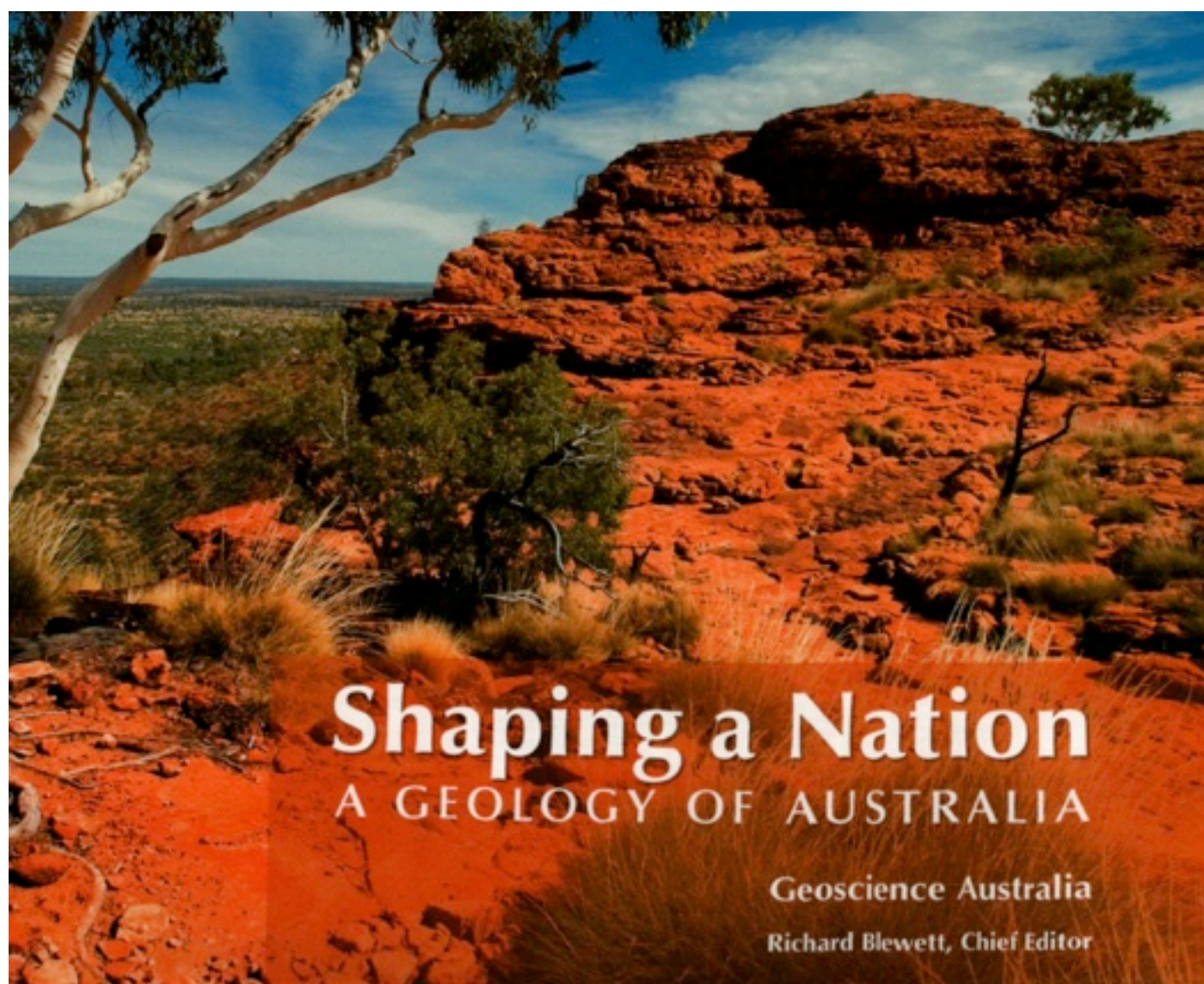
The summary of the chapters above is very minimal and gives an inadequate view of the generous scope of the book which has numerous maps, diagrams, photos and tables. Scattered throughout are many sidebar boxes headed 'Did you know?' with lots of interesting facts.

The 5.8 GB DVD is amazing! The "movies" (I hate that word) are just wonderful! As is the rest of the material on the DVD which includes the whole, fully laid out text, maps and diagrams of the book is equally fabulous. Incidentally the whole book can be downloaded chapter

by chapter from Geoscience Australia – but you better have plenty of bandwidth – something over 100 MB – but you don't get the DVD material. A word of warning – my DVD was damaged – it could be read but not completely – by the sheer weight of the book on the thin cardboard sleeve at the back. I am hopefully awaiting a new one ...

My one whinge is about one series of three maps showing Australia overlying continental USA, Europe and China. I feel that it would give a more complete picture if Australia was in its correct latitudinal position and inverted.

For those who might like a more conventional geology of Australia I have given details of David Johnson's, 2004, **The Geology of Australia** below.



A Karst Atlas of New South Wales: The documentation system has been produced by Peter Dykes after decades of data gathering and discussion and is published by the ASF at \$25 including postage. It is a much slimmer volume of 90 pages plus a CD. This volume sets the scene for a further 14 planned volumes detailing the now defined karst regions of New South Wales. The Introduction states:

The intention is that as documentation is completed in a region, instead of waiting for the rest of NSW to be finished, the results will be immediately published.

Let us hope that the 14 volumes are not too long away.

The book is in three parts:

Part one – Cave and Karst Documentation. This provides an introduction; a history of NSW documentation efforts; defines the numbering system and of the 14 regions and discusses of Aboriginal cultural heritage issues. This latter is very close to Peter's heart.

Part two – The Karst Regions. This discusses each of the regions under the headings:

Region Code (e.g. BJR for Burrinjuck).

Regional Geographic Boundaries (e.g. Murrumbidgee River catchment above Tumut River to the Molonglo River).

Catchments – lists the catchments which contain karst areas.

Regional Summary – a few pages outlining the features of of the region. This is followed by a table listing the Cave Areas and their sub-catchments.

Following the 14 regional descriptions there is a foldout map of the State showing the regions.

Part three – Bibliography, Glossary and Appendices. The Appendices are:

New South Wales Cave Areas.

Locality Numbers Used by Lishmund et al. (1986 – a listing of the limestone deposits of NSW).

Disused Cave Area Names.

NSW GIS Karst Regions and Cave Area Datasets (on CD).

NSW Metadata Statement.

Bibliographic details:

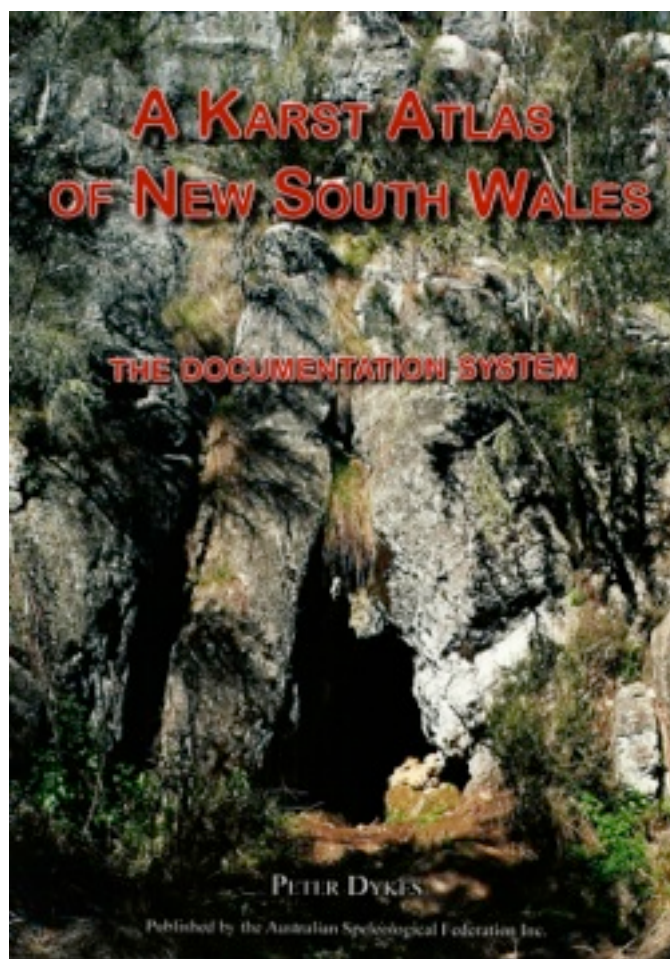
Blewett, Richard, (Chief Editor) 2012, *Shaping a Nation: A Geology of Australia*, Geoscience Australia & ANU E Press, 751 pp + DVD. \$70.00 + postage (about \$34 to Perth; about \$18 to Melbourne) from:

<http://www.ga.gov.au/products-services/how-to-order-products/sales-centre.html>

Dykes, Peter, 2001, *A Karst Atlas of New South Wales: The documentation system*, Australian Speleological Federation, Inc, 71pp, \$25.00 including postage from:

<http://caves.org.au/publications.htm>

Johnson, David, 2004, *The Geology of Australia*, Cambridge University Press, 276pp. \$69.95 when I bought mine a few years back.



I cannot comment on the contents of the CD as most of the information thereon is in ESRI Arcview and Arcmap geodatabase format and I currently do not have access to these programs. All in all this is a very creditable start – long in gestation – to what will ultimately become a very useful collection of information. I hope the cavers of NSW will accept what Peter is effectively challenging them to – bring the information into a coherent whole. By the way the difference between data and information was once graphically described to me as follows:

A library card catalogue is information; once those cards are strewn across the floor and shuffled it is data!