

## Some Recent Natural History Publications #28 April 2020

\*\*\*\*\*

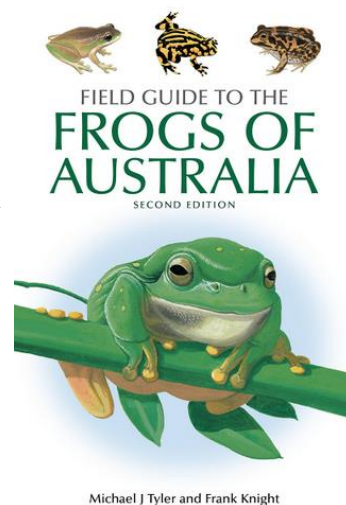
### **Field Guide to the Frogs of Australia**

Michael Tyler and Frank Knight  
CSIRO. 208 pages. RRP \$50

It is now a decade since this formidable author-artist team produced the first edition of this work, in which they filled the last major gap in 21<sup>st</sup> century Australian terrestrial vertebrate field guides. Sadly Tyler, who became something of a legend, died just a few weeks ago (26 March). He started his professional life as a laboratory technician at Adelaide University in the school of Human Physiology and Pharmacology, nearly died at one stage from lead poisoning from handling old museum specimen frog labels, studied frogs for his Master of Science in his 30s and spent the rest of his working life in the Zoology Department. He was also an Honorary Associate at the SA Museum for decades, and then Curator Emeritus. He was widely regarded as the doyen of Australian frog specialists.

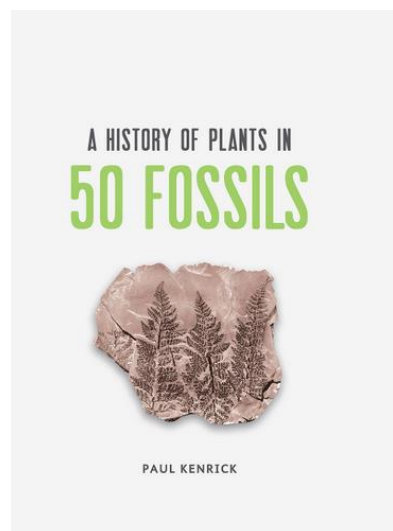
Knight can also claim legend status. At the time of the publication of the first edition of this work, he was also the illustrator of the only meaningful national mammals guide and very arguably the key bird guide. That guide has now been equalled at least by the more recent CSIRO bird guide, but his position as leading illustrator of across-group vertebrate field guides in Australia remains unchallenged.

In 2010, in reviewing the first edition, I wrote: "This is what I want of a modern field guide; three or four species to a page, so the illustrations are large and clear, with enough space for some useful text, including distribution notes (in addition to a map), behaviour (which however really refers only to breeding biology), conservation status, habitat, call and similar species. Where relevant, top or bottom views are also shown, and colour variations as appropriate. You need this book." All that still applies to this edition, though the 227 species covered there have now grown to 258 (including 10 non-natives). Moreover, in his Preface Tyler tells us that he had another ten species waiting to be described and expected more. Sadly he won't be describing them, though others inspired by him doubtless will, but this guide will remain a fitting testament to his massive contribution to Australian froggery. That alone is a good enough reason to buy it.



### **A History of Plants in 50 Fossils**

Paul Kenrick  
CSIRO. 160 pages. RRP \$35



I am immediately minded of *A History of Life in 100 Fossils* and *A History of Birdwatching in 100 Objects*, both from 2014. I'm a bit of a sucker for this line of approach so I'm predisposed to like it but, on the other hand, I'm prone to disappointment if it doesn't meet my expectations. Any such fears I may have harboured for this book would have been entirely groundless. From the first long paragraph of the introduction, beginning "It's not easy being a plant", I was hooked. Kenrick writes beautifully. He's done lots of writing – more than 70 scientific papers and two books on plant evolution – but that mostly requires a very different style from this. These 50 stories are written for people like us who, while required to make a bit of an effort to imagine time scales beyond our comprehension, are not expected to have a palaeontological vocabulary. Kenrick has the advantage of working at the London Natural History Museum – surely one of the best indoor workplaces in the world! – and draws on their cornucopia of material and, presumably, their rich photographic resources. The photos are stunning. Each story comprises a page (occasionally two) of text and a facing full-page photo. There are seven chapters – *Origins; Seeds, roots and leaves;*

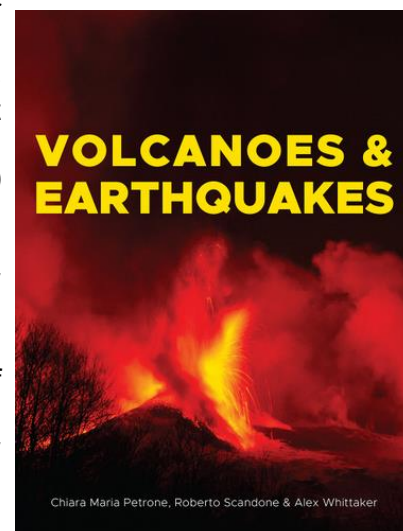
*Rise and march of forests; Friends and foes; Ancient plants; Climate and diversity; Flowers; Plants and us.* Within these themes, each story marks a key point in the evolution of plants, from ancient marine origins to the invasion of land to the development of forests, significant but long-gone lines such as the seed ferns, the first flowers and fruits, evidence of interactions with animals, and evidence of grain

domestication (which are not really fossils actually). Each story begins with an eloquent description of the fossil. To take just the first one as an example: “Undulating bands of orange and red snake across the cut surface of this 2.6 billion year old rock.” Clear and evocative. This evidence of the first photosynthesis is from the Hamersley Basin in Western Australia; Australia features again in the Wollemi Pine story. I am delighted that this book has crossed my desk and, having read it for pleasure, I shall doubtless be referring to it repeatedly in the future for its wealth of information.

### **Volcanoes and Earthquakes**

Chiara Maria Petrone, Roberto Scandone and Alex Whittaker  
CSIRO. 144 pages. RRP \$30

I am always pleasantly surprised to find a readable text on geology. For some reason many geologists who have taken to print seem not to have been good at communicating with laypeople, though to be fair that's probably changing. It's a field in which I'm fully aware of my manifest inadequacies, so I'm delighted to find this book which is accessible (though some passages introducing new concepts needed reading twice) and interesting – and I hesitate to say it, but in places even entertaining! The authors are well-qualified indeed: respectively they are Research Leader in Petrology and Volcanology at the British Natural History Museum, Professor of Physical Volcanology at the University of Roma Tre, and Senior Lecturer in Tectonics at Imperial College London. Together they set the scene by describing the nature and significance of tectonics (and win my approval by using the word ‘excitingly’ to describe a concept – a scientist *should* be passionate and excited), and how volcanoes and earthquakes are studied and measured. They then explain how tectonic activity leads to the various types of volcanoes and earthquakes, with examples of explosions and quakes from history, right up to the present. The book is generously illustrated with photographs of volcanoes, peacefully scenic and dramatically raging, and the breath-stealing aftermaths of earthquakes, plus lots of helpful graphics. The authors make it all very real, by numerous accounts of the impacts of violent geological unrest on communities from ancient times to current ones. We read of the destruction of 85% of Lisbon by earthquake and subsequent tsunami in 1755, with perhaps 40,000 deaths, and the Indian Ocean earthquake of 2004, which none of us will ever forget due to the intensive news coverage, which killed a quarter of a million people in at least 14 countries. Volcanic human disasters include one in Sumatra 74,000 years ago which, it is suggested, may have reduced the then-growing and spreading human race to just a few thousands in the subsequent ‘volcanic winter’. However, the authors also suggest that early humans benefited from the rich volcanic soils of the East African Rift Valley. I didn't know about the fate of the town of Tetimpa 2000 years ago, a sort of Mexican Pompeii. I knew a little about the mighty Krakatau eruption of 1883, but didn't know that its aftermath was responsible for Turner's paintings of pink and mauve sunset skies over London. I knew almost nothing of the 1815 explosion of another Indonesian volcano, Tambora, but I now know that its atmospheric impacts caused an abnormally cold wet summer across the Northern Hemisphere and widespread and catastrophic crop failures. How it also led to the end of the Napoleonic Empire and the writing of *Frankenstein* you'll have to read for yourself! I am now also uncomfortably aware that the only way to survive pyroclastic flows – ‘very hot avalanches of volcanic ash, pumice and rocks’ – is ‘not being there’. I was startled to learn that some 67 large cities are located on or very near an active volcano, including Tokyo, Manila and Mexico City. It's a fascinating read, and an often surprising one. If you're looking for something educational and perhaps a bit different in these long days of viral incarceration, you could do a lot worse than this one.

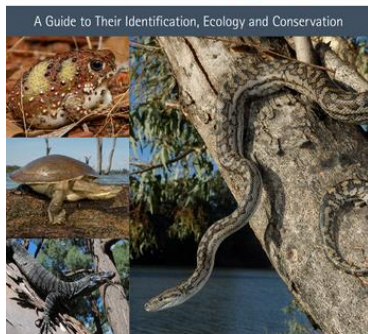


**Frog and Reptiles of the Murray Darling Basin**  
*A guide to Their Identification, Ecology and Conservation*

Michael Swan

CSIRO. 352 pages. RRP \$50

**Frogs and Reptiles**  
of the  
**Murray-Darling Basin**



MICHAEL SWAN

Australia seems to be abundantly blessed with good quality field guides to reptiles and frogs; this is good for both herpetologists and the rest of us, because we're pretty well off for reptiles and frogs too. In addition to national guides for both reptiles and frogs (e.g. see the previous review), there are state guides to the reptiles of NSW and Victoria and to the frogs of Queensland, and regional guides to both e.g. the Perth area and the Victorian mallee. This title chooses to cover the mighty Murray-Darling Basin, a million square kilometres of inland south-eastern Australia. The author, Michael Swan, is former senior reptile and frog keeper for both Melbourne Zoo and Healesville Sanctuary and coordinates the Lilydale High School reptile collection, "the largest school collection of reptiles and amphibians in Australia"! Lucky Lilydale High students I say – how I'd have loved to attend such a school. (I do wonder how many other school collections it's actually competing with though.) A note here; Michael is not to be confused with Gerry Swan, co-author of excellent guides to both national and NSW reptile field guides. This book completely overlaps a previous CSIRO title, *Reptiles of the NSW Murray Catchment*, though that one, with a smaller catchment area and

no frogs to consider, was able to offer quite a lot more detail per species. This of course raises a perennial question as to how many field guides we need for a given group of animals, though even the burgeoning herpetology field is relatively modest compared with the five major Australian national bird field guides. I some time ago decided that only the market can meaningfully answer that conundrum. So, this book? It's good, as I'd expect from CSIRO. It begins excellently, with an introduction to each of the basin's 22 sub-catchments, with useful but succinct information on their geography, towns, vegetation, significant wetlands and numbers and key species of 'herps'. Species maps are good, large enough to be clear, though this is not always true for the photos unfortunately. There is a brief introduction to each family and genus, and the expected species notes on size, description, habitats, notes and similar species (mostly all just single-sentence paragraphs) and sub-catchment occurrence. If your 'thing' is herpetology you'll probably want to add this to your library, and if you live in the catchment it's probably a worthwhile investment. As I said, it's mostly a market decision, but if you're interested in such a guide you wouldn't be disappointed in this purchase.

*Ian Fraser is a Canberra-based professional naturalist and writer who is the author of eight books on local natural history, most recently Birds in their Habitats, journeys with a naturalist, CSIRO Publishing 2018. He ran the educational Environment Tours nature-based tours program from 1984 to 2015 and was the voice of natural history on local ABC radio for 24 years. The ABC in 2004 produced a four-CD set of his 'Around the Bush Capital' series. In 2001 he won the Australian Plants Award, Australian Native Plants Association, professional category; in 2006 he was awarded the Australian Natural History Medallion and in 2018 an OAM for 'services to conservation and the environment'. In 2012 he launched the natural history blog 'Ian Fraser, Talking Naturally', at <http://ianfrasertalkingnaturally.blogspot.com.au/> He claims no expertise and has no natural history favourites – except for birds and orchids...*

*This periodic review is emailed free on request, in order to help anyone interested in Australian natural history to keep up with the burgeoning literature. Previous issues available at <http://www.botanicalbookshop.com.au/page/ianfraserreviews.aspx> for which my thanks to Tom Butts of the Botanical Bookshop.*

*calochilus51@internode.on.net*