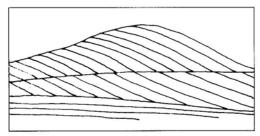
BACK TO WESTERN AUSTRALIA

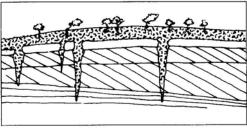
- Kent Henderson

The Pinnacles – Nambung National Park

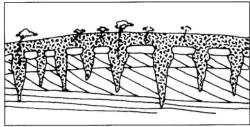




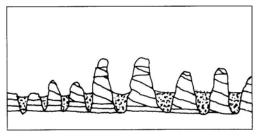
 Lime leached from the sand by rain cements the lower levels of the dune into a soft limestone.



Vegetation forms an acidic layer of soil and humus. A hard cap of calcrete develops above the softer limestone.



Cracks in the calcrete are exploited by plant roots. The softer limestone continues to dissolve. Quartz sand fills the channels that form.



Vegetation dies, and winds blow the sand covering the eroded limestone. The pinnacles appear.

In mid September I found myself in Perth on business for about a week but, happily, with a little bit of spare time. Thus it was I fitted in a flying visit to Nambung National Park north of Perth for a look at *The Pinnacles*. It was easy to see why this karstic feature is one of Western Australia's top tourist attractions. Stunning stuff, indeed! For those whose haven't seen them, I proffer an adjacent photo (which doesn't do justice – there are thousands of *pinnacles* over many square kilometres), plus an explanatory diagram from the Park brochure.

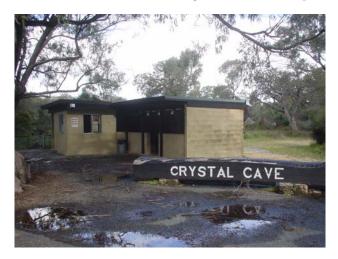
After The Pinnacles, I called in at Yanchep National Park to visit Crystal Cave. I first visited this tourist cave, just north of Perth, during the 1991 ACKMA Conference. Little has changed since my last visit, but a great deal needs to be achieved, and should be achieved, in this cave. My tour guide, Stephanie, though very pleasant, seemed to me to be under trained. Her cave and karst knowledge was under done - an area management should address. I asked her after the tour what professional development training she got, and was advised nothing, despite her and the three other full time guides asking for it. Contrast this with Margaret River, for example, with its wide-ranging (and regularly updated) Training Manuals, its extensive and intensive training regime, regular guide meetings, in-servicing, probational periods for new guides.... I'll come to my guided tour experience at Lake Cave shortly.

One immediate problem in Crystal Cave, among many, that should be fixed without delay is its widespread *lampenflora* problem. There really no excuse these days. I do understand that a number of people are working to improve cave and karst management at Yanchep, and I wish them well – they have a great many challenges. Certainly, the area has very major hydrological problems, which are acutely obvious in Crystal Cave itself. Coincidentally, a brief "news short" appeared in *The West Australian* (14/9/02) during my stay, which seems to indicate some progress. It read as follows:

"The State Government has moved a step closer to removing pines that suck about 36 gigalitres of water a year from the Gnangara Mound with the Legislative Assembly endorsing the move.

Premier Geoff Gallop announced an agreement last month with Perth company Wesbeam to turn the 24,000ha pine forest into laminated structural timber over 25 years.

The Wood Processing (Wesbeam) Agreement Bill 2002 needs to be passed through the Upper House for the agreement to go ahead. The plantation has been blamed for drying up Yanchep caves, loss of wetlands and declines in the Gnangara aquifer and the underlying Yarragadee aquifer"



Later in my stay, I had the pleasure of visiting the caves in the Margaret River/Augusta region south of Perth. Robyn McBeath and Stefan Eberhard kindly put me up overnight at their home, for which I was most grateful. Upon arriving at the wonderful "Caveworks", Robyn wisked me off firstly to visit Lake Cave.

As a tour was happening, we tagged along with Neisha, clearly a highly trained and high motivated guide. She was pleasant, enthusiastic, and let me tell you she knew her stuff - just the right mix, and quantity, of history, science and geology, and a confident and knowledgeable approach to visitor's many questions. She gave those on the tour a superb visitor experience. And Lake Cave itself? All those who have visited in the past as I have done several times know what a quality cave it is. But what has made it more sensational is its relativelyrecently completed computerised new lighting designed by Peter Bell and Robyn McBeath. Stunning! And it was planned and executed with the thorough input of the guides themselves. THIS is how to develop or re-develop a cave, of which some other cave locations could well take note. The lighting is 12v, non intrusive (no light bulbs in the eyes here), subdued, and offers the guide maximum control and flexibility.



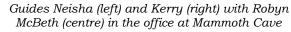
The galvanized iron tunnel in Crystal Cave



Moving on, Robyn took me to Jewel Cave at Augusta - where the falling water table has long been viewed as a problem and resulting in the aquatic fauna being listed as critically endangered under the Commonwealth EPBC Act (1999). So what was the response of the management authority. The Augusta Margaret River Tourism Association (AMRTA)? To employ noted karst expert, Stefan Eberhard, to undertake a comprehensive three year study of the hydrology and biology of the entire Jewel Cave karst system catchment (which includes Easter and Labyrinth Caves). His report has just been published, and it comes up with some interesting and revealing results that significantly re-write previous understandings and perceptions of the causes of the watertable decline, the threatening processes affecting the aquatic fauna and the conservation measures required.

Jewel Cave itself has undergone significant upgrading in recent years, with much more to come. More recently, the boardwalks in the lower sections of the cave have been replaced, and wonderfully so. Over the next few years it is planned that the lighting will be updated completely, the current surface infrastructure will be replaced, and the car park moved and sealed. All wonderful and appropriate forward planning as funding comes online.

We then moved onto Mammoth Cave back near Margaret River. Since my last visit extra above ground infrastructure has been sited (new toilets. etc), the cave's internal boardwalks completed, and a complete re-lighting undertaking - all with tremendous effect. The lighting is Peter Bell's and Robyn McBeath's outstanding handiwork again! But most significantly, the cave has been converted to a "self guided" experience, with visitor's being provided individual headsets and a recorded commentary. This is a different cave experience (the only one of its type in Australasia), which has proved enormously popular, and has resulted in an ongoing significant increase in visitation to Mammoth Cave. Not "just another cave tour" here, but a visionary approach which has re-made the cave from a tourist perspective. It says volumes about the quality of cave management at Margaret River.





Late in the day, I called up to Yallingup to visit Ngilgi Cave, and caught up with Cave Manager, Liam Kinsella. As readers with long memories may recall, the last time (some years ago now) I visited and wrote on Ngilgi I had a few uncomplimentary things to say. I am happy to testify that the problems I reported on then are largely fixed. The lighting in the first chamber, to the left of the entrance steps, has been readjusted, so that now the lights no longer shine in visitors' eyes. A number of sections of the cave have seen new tracking and handrails. This is particularly so in the main (lower) chamber, where all the raised pathways and handrails are of recycled plastic. It really is quite effective. While the railing is obviously plastic, one would be hard pressed to



At dinner in Margaret River: L to R: Robyn McBeth, Stefan Eberhard and Anne and Peter Wood



The entrance doline to Lake Cave, Margaret River



notice the pathways as such. Of course, plastic will not corrode, and is thus very cave friendly. Its efficacy in fire, on the other hand, may be open to question, but perhaps no more than the wooden infrastructure seen some other caves. Ngilgi is a stunning cave, particularly its lower sections. It is "semi self-guided" with a guide stationed on a platform in the centre of the main chamber during opening hours. Still, there is much more to do in the cave, of which its management is very well aware. Liam attracts a development budget of about \$25,000 per year (far from adequate, but at least it is on-going) so prioritised refurbishment, while not immediately spectacular, is steady. Liam, many thanks once again for your hospitality - I greatly enjoyed the drink and chat with you and your staff after our tour!

That evening, I was delighted to join Robyn and Stefan, and Anne and Peter Wood, for a superb dinner at a wonderful Margaret River restaurant. The following morning, prior to leaving the area to drive back to Perth and my flight back to Melbourne, I called in to Anne Wood's patch at Calgardup Cave. CALM manages the caves in the Leeuwin-Naturaliste National Park (other than those managed by AMRTA and AMR Shire and private landholders). Two are open as self-guided caves, Calgardup and Giants Caves (the latter of which I did not have time to visit again on this occasion). Since my last visit considerable new raised tracking and handrails have been installed in Calgardup, with more to come. And it has been very well done. The area is particularly fortunate to have a skilled operator in Anne as onground cave manager, and I was delighted to learn that Neil Taylor, after some absence, has recently returned as this CALM region's Recreation Officer, and thus effective "karst officer" (though karst is not his only area of responsibility). Neil, a long-term ACKMA member, has a good breath of karst experience.

I am delighted to advise that Robyn, Stefan, Anne and her husband Peter, and Liam (with wife Jenny) all expect to be at our Chillagoe/Undara Conference next May. Hopefully there will be other Western Australians present as well as, one would hope, representation from Yanchep.