

CAPRICORN CAVES: and a very BRIEF HISTORY of AUSTRALASIAN CAVE LIGHTING

Kent Henderson

It was way back in early 1991, nearly 25 years ago, that I first visited Capricorn Caves, near Rockhampton, and initially met (now) ACKMA Life Member Dianne Vavryn and her husband Joe, who have remained my firm friends ever since. Of course, at the same time I met Ann and (the late) Ken Augusteyn who had been the owner/managers of the caves for a mere three years.

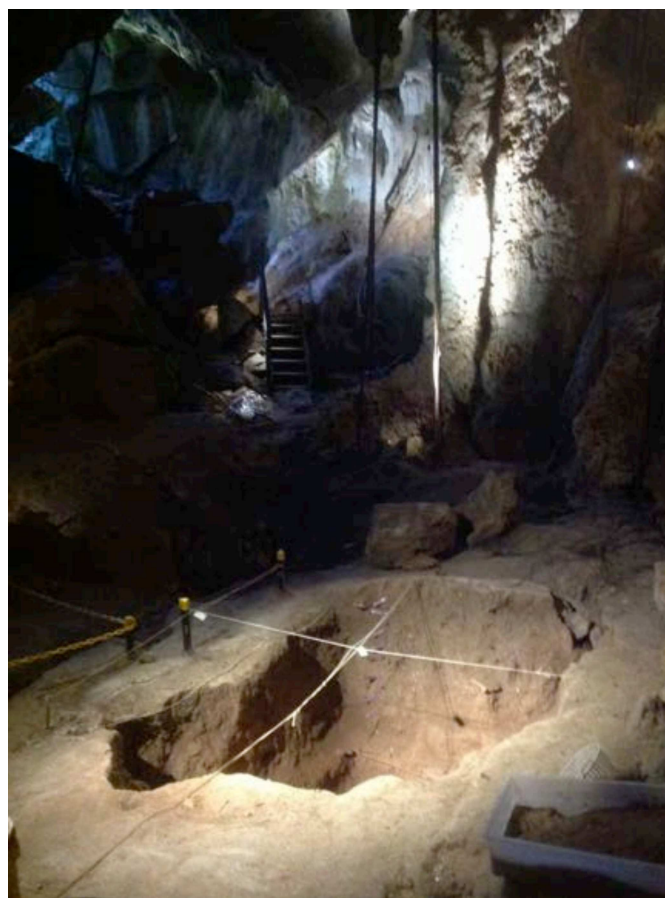
At that stage they knew relatively little about cave and karst management, and had never heard of ACKMA. Well, that soon changed! I *induced* Ann to attend the upcoming 9th ACKMA Conference at Margaret River, Western Australia, and also to bid for the 10th Conference in 1993 - which she won!



*Dianne Vavryn, Kent Henderson and Ann Augusteyn
at Capricorn Caves
Photo: Kent Henderson*

Indeed, the 10th Conference was an outstanding success, with a (then) record 62 delegates. Ann has been a regular ACKMA Conference attendee ever since, served a term as Vice President, and latterly was elected as a Fellow of ACKMA. In the last 25 years she has certainly developed into an 'expert' (however one defines the term...). In that time, the main thrust of her development of the cave system was above ground. The results have been awesome including a full range of top class accommodation, a conference centre, a wonderful visitor centre with a large and excellent interpretative area, and much more.

There was an exception to my plaudits...while the above ground development was outstanding, below ground its re-development was underdone. Certainly, much updated and new tracking (largely wood, an issue in



*The fossil dig site in Capricorn Caves.
Superbly lit, with the surrounds neatly
offsetting LED and natural lighting.
Photo: Kent Henderson*

itself...) and disabled access were installed. However, the cave was desperate for re-lighting; to say the existing 32v lighting (installed in the 1970s...) was tired was definitely an understatement! I was 'on her case' over the succeeding years, rarely failing to mention to Ann the wonders of new cave lighting happening elsewhere. Ah, it was all a matter of money... Yes, well, such was the case with the above ground developments too - all a matter of priorities; but I did understand the economics, nonetheless.

It has been most interesting to witness the development of cave lighting in Australia and New Zealand since I attended the foundation meeting of ACKMA at Yarrangobilly way back at the 7th Conference in 1987. At that stage, cave lighting everywhere largely consisted 240W domestic light globes and paraflods (with lampenflora rampant), or the even more archaic 110V fittings at the likes of Jenolan and Wombeyan, with the globes needing to be especially imported from the USA -



*A newly-lit feature, with the LEDs set to give a contrast between light and dark.
Photo: Kent Henderson*

to even 32V fittings at Princess Margaret Rose Cave! We have certainly come a very long way since 'the old days'...

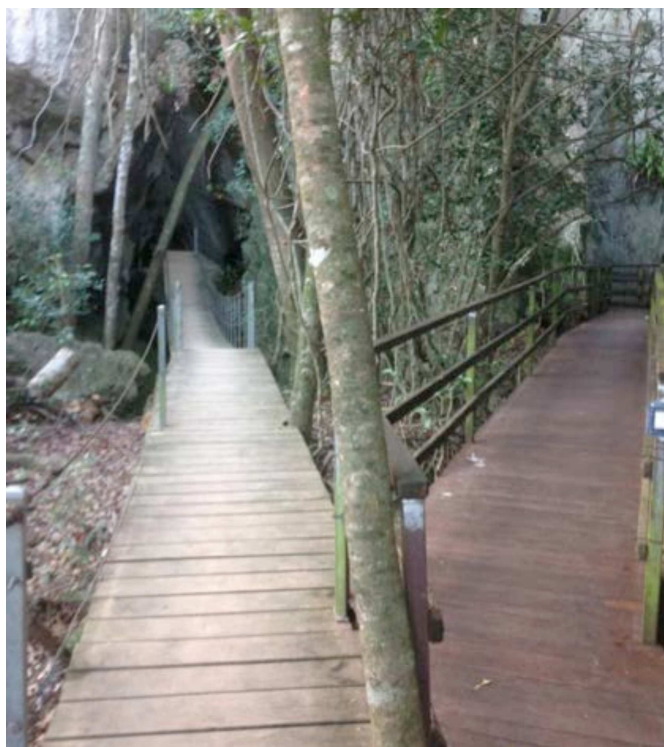
The first real attempt at innovative cave lighting was effected by the then local rangers at Kelly Hill Cave on Kangaroo Island - Herb Stichel and Roger Collins. They started by stripping all the (very!) old lighting and conduit out of the show cave and starting again. They basically had an electrician place about half a dozen power boxes strategically in the cave, and ran multiple conduit from each themselves.

Their aim was to effectively light the key features of the cave but in doing so to hide both the conduit and the light fittings. And they spent hours doing it to get it right! Of course, pretty much the entire floor of Kelly Hill cave is strewn with boulders of various sizes, which in itself greatly assisted their task. The result was outstanding. You could probably have argued that Kelly Hill was the 'world's best lit show Cave' at that time. Nowhere in the cave could a light bulb or any conduit be seen from the tourist track. Very much 'state-of-the-art' - then...

The next impetus in cave lighting came via (ACKMA Fellow) Neil Kell, the erstwhile manager of Yarrangobilly Caves (and long term casual guide) who won a Churchill Fellowship to study cave lighting around the world. Neil became, as a result, a world-class expert, and his CV runs to the re-lighting of many Australian caves - at Yarrangobilly, Hastings, Cutta Cutta, and overseas, as well as consulting.

Over the same period, lighting technology advanced - in came dichroics and associated innovations; gone were strands of ugly domestic light globes blinding tourists and washing out the cave features they were supposed to illuminate.

And latterly, along came LEDs, the technology now developed to the point of greatness - with low cost, low intensity, yet high light yielding fittings from 'pencil lights' to focused parafoods. What Jenolan electrician Dave Rowling has achieved in re-lighting various caves at Jenolan, using LEDs, has been awesome.



*Entrance infrastructure at Capricorn Caves. The extensive use of timber tracking in the caves was largely inherited by the Augusteys. Wood in caves is not a good idea, but in their prevailing 'largely dry' cave environment, degradation is not the potential issue it is in 'wet' caves.
Photo: Kent Henderson*



*An LED track light at Capricorn Caves
very effective.*

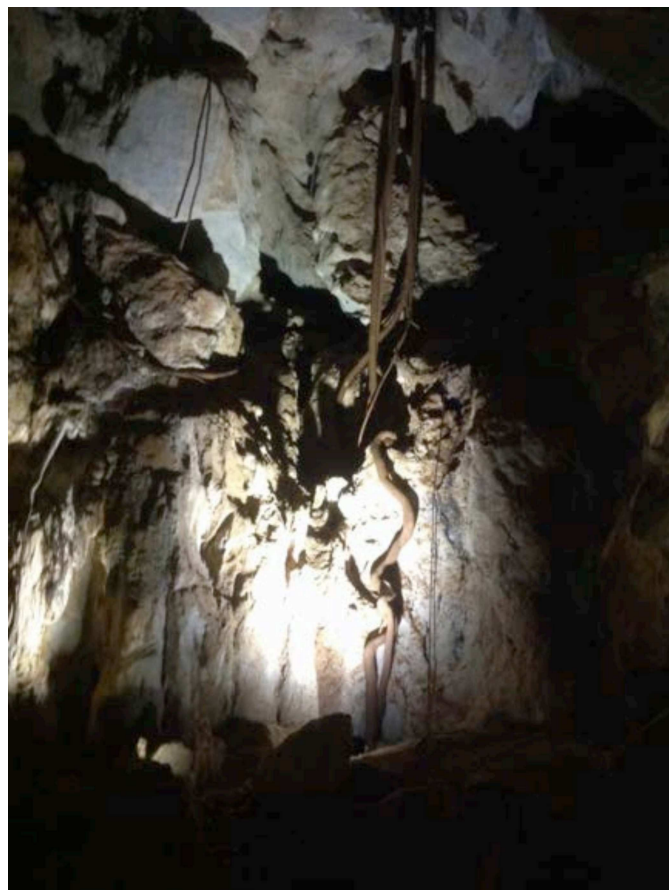
Photo: Kent Henderson

It is fair to say that as a group, the show caves of Australia and New Zealand are the best lit in the world. Indeed, over the life of ACKMA - so to speak - virtually every one of our show caves has been re-lit (some more than once!)....until recently with one major exception.

And so, I return to Capricorn Caves, and my long term 'nagging'. But, hallelujah! With the help of some government funding from the Tourism Industry Regional Development Fund (TIRF) at last it has been done! Well done, Ann, and team! (finally...) Although I will say, waiting for the latest LED technology was probably a good thing. However, having the technology doesn't necessarily mean the job will be done well...

The Capricorn Caves re-light was very largely achieved by Ann's son, John Augusteyn (with technical advice from Dave Rowling and help from staff member Lucas Zielke). John, who is a Senior Conservation Officer with the Queensland Department of National Parks, Sports

and Racing, had - obviously - grown up in the cave, not literally, but close. He therefore knew every nook and cranny, and over the years has clearly developed a great empathy for it. And he has achieved a truly outstanding job! Features not highlighted before now are. Light globes are rarely seen from the immediate tourist track - virtually all have been well hidden. Most (but not all - I quibble) conduit is also hidden. The cave is not over-lit, nor under-lit. In my view John has got the balance largely right. Pretty much 10 out of 10 Ann and John! So, it was worth the wait...albeit a very long one.



*Back lit tree roots in Capricorn Caves. The LEDs have
been skilfully set to highlight the feature,
and at the same time provide an 'air of mystery'.*

Photo: Kent Henderson

Of course, in May next year ACKMA will be holding its 2016 AGM weekend at Capricorn Caves (although I am disappointed it won't be a full ACKMA Conference...). Nonetheless, it is an event not to be missed. It can now be said, without any doubt, that both the above and below ground infrastructure of Capricorn Caves is collectively amongst the best in the world. Well done Ann, and crew, you have done us all proud!