

CAVE AND KARST MANAGEMENT IN THE NARACOORTE REGION, SOUTH AUSTRALIA

An Independent Review

- Grant Gartrell

Editor's Introduction

It is not my normal practice to review the contents of an article submitted to the ACKMA Journal, particularly one that I have actually requested, but I make an exception with this outstanding paper by Grant Gartrell.

It is written from the perspective of his vast 30 plus years of experience in caves and karst in general, and of Naracoorte in particular. I find his incisive insights into the management of caves and people to be particularly compelling, and the balanced and rational ways he marries together the needs of both *competing* interests. Indeed, this paper can, in my view, be listed as one of the most important published in this Journal, and be cited as required reading by any cave manager. It contrasts somewhat with the more controversial opinions and solutions posed by Messrs. Poulton and Andreef in the last Journal. Read on.....

While I would much rather be caving than generating more paper on the subject, it would appear that over the past ten years it has almost become impossible to do the one without the other. Forms for this, insurance policies for that! Is there no escape? Not even down a cave, it would seem! And yet I couldn't pass up the opportunity to review Cave and Karst Management in the Naracoorte region over the last ten years. It's not every day I get the chance to write a report card for Brian Clark!

Any review of Cave and Karst Management will of necessity be a personal viewpoint, and in my case, because I've been around a long time, will probably be a trifle cynical. On both counts I am unrepentant.

Let us distinguish at the outset between the management of caves and the management of karst. From an economic viewpoint the latter is the bigger problem, and we will deal with that first. The geomorphology of the South east of South Australia is strongly influenced by karst development of the Gambier limestone which extends throughout the region. For a more detailed description, check the excellent article by Ken Grimes at the ACKMA web site. The drainage of the landscape is largely subterranean, with surface streams a rarity. The countryside has been extensively cleared for farming and forestry, and in the past land managers have covered the full spectrum from the few who have some awareness of and concern for the special features of their land, through to those with perhaps the more common perception that holes on their property were provided for the convenient disposal of dairy effluent, carcasses, old fencing wire, car bodies and drums of unwanted farm chemicals.

Elsewhere throughout rural Australia over the past decade the concept of Landcare has been taken up with some enthusiasm. As well as undertaking general initiatives for revegetation, erosion control and the like, a number of Landcare groups have been structured specifically as catchment groups, or have developed some

catchment related initiatives, such as water quality monitoring, fencing to exclude stock from watercourses, minimisation of nutrient runoff by, for example, establishing dairy effluent storage ponds, woodlots and wetlands. While not everyone in rural Australia is green to their boot heels, it is apparent from the Landcare movement that a high percentage of farmers want to protect their futures, and see good economic sense in embracing practical measures to ensure that they are farming according to the principles of sustainable agriculture. Once they appreciate the principles involved, many of these farmers and their families also take quiet pleasure from the fact that their adoption of sustainable practices is at the same time helping to conserve and even reestablish the biodiversity of their regions.

Yet pressures on caves and karst from agriculture are still increasing, with the latest being extensive new plantings of grapes. Often this involves use of heavy earthmoving machinery for deep ripping the soil and smoothing out undulations. In the process there is no doubt that a number of cave entrances have been filled and destroyed, possibly because machinery operators do not even realise that they may be significant. This was once the case for forestry operations as well, but in this area at least, it is pleasing to note that more enlightened management practices have been adopted in recent times.

In conventional water catchments it is easy to see that a surface creek is being polluted or dammed, but in a karst drainage area the processes are much less visible and generally not well understood. For most people, "out of sight" is still "out of mind". I believe that the time is right to turn this around by capitalising on the good will generated by the Landcare movement, and to undertake some publicity in the region, and in fact throughout the whole of the South-east, to promote the concepts of Cavecare and Karstcare as an integral part of Landcare.

Now let us turn to the management of caves. In the Naracoorte region some caves are on private property and some are under the care and control

of the Department of Environment, Heritage and Aboriginal Affairs (DEHAA).

The management of privately owned caves is a matter for the individual owners. As has been clearly demonstrated elsewhere in the State, there is no intrinsic protection of caves, nor therefore of cave fauna in South Australia. You may not be able to chop down a native tree on your property, or even kill off native grasses, without a permit, but if it's underground and it's irreplaceable, and it's not administered by DEHAA, the South Australian Government is not interested in providing it with legislative protection. Owners may do what they like with their caves, including totally destroy them. Few landowners are that bloody-minded or that greedy, but few appreciate fully what lies under their land. Where access is available to cavers, groups such as the Cave Exploration Group (SA) may, if approached, help the owners to understand the values of the cave system, carry out systematic exploration and survey, and where it would appear to be warranted, assist the owners in management of access to the cave system. In some instances this might involve the design and installation of a cave gate, coupled with guiding criteria for issue of keys. It could simply be providing the landowner with a list of approved trip leaders.

Now we come to the Naracoorte Caves Conservation Park. It's Brian Clark's lot in life to cop the flak which is inevitably generated by the Park's cave management strategies. Since caves have survived by themselves long before humans came along looking for something to manage, what we really mean by cave management is the management of people who interact with caves. People management is a bit tricky. It is difficult to please one bunch of people without upsetting another. It has been said that you've found the right balance when you're upsetting everybody equally. That's probably not true in this case, and Brian certainly doesn't play it that way. Whether they agree or disagree with him, just about everyone who has dealings with Brian would recognise in him and respect perhaps the most important quality of all. He cares.

There is no doubt that unrestricted access to all caves would eventually result in all caves being thoroughly trashed, even if only by a small percentage of the population. The opposite strategy of protecting caves by locking them all up and throwing away the keys would also be a failure, but for more subtle reasons. This would work only while there is a reasonable level of public support for the protection of cave values. Without some access to caves, without some of the excitement of exploration and discovery to maintain levels of public interest in the romance and mystery of our underground heritage, public awareness would fade, and along with it political support for maintenance of the asset.

Practical management involves charting a middle course. Over the last ten years or so management plans have been drafted, and cave classification and caver accreditation schemes devised in an effort to come to grips with the problem. I don't think that we have got it right yet. Cave

classification schemes suffer from the problem that sometimes different sections of the same cave should have different classifications. The administrative solution is usually to apply the most restrictive classification to the whole system, fostering legitimate resentment and encouraging even serious cavers to regard such a system as a failure. Caver training is important, not just in safe caving techniques, but in the recognition of a broad range of conservation values of caves. This training is available to cavers within the mainstream of the Australian Speleological Federation, but is not readily accessible to others with an equal need for it, for example researchers narrowly focussed on their specific aspects of cave science and oblivious to other values of the cave system, which may suffer as a consequence.

Many of these problems can be overcome by improved communication, and this could be assisted by a consultative committee established to review the successes and shortcomings of the current system, and to arbitrate or collect more data in the grey areas. To some extent this has happened from time to time on an informal basis, but if I was writing the report card, it would look like the ones my teachers used to write about me saying that I "could do better." So for the future I would recommend that the consultative processes be strengthened, the paperwork be kept to a minimum, and a spirit of cooperation between all parties with a legitimate interest in the resource be fostered.

Brian is reputed to have once said, obviously tongue in cheek, that exploration of caves in the Conservation Park should be discouraged, because the management problem was big enough now. Why add to the problem by finding further caves to manage? Equally, one might ask, why add to the problem by seeking World Heritage listing for the site? To find the answer we do not have to look further than the discovery in 1969 of the Fossil Cave as a consequence of systematic exploration of the Victoria Cave. In a recent magazine article featuring the wonderful paleontological work of Rod Wells, which has been the basis for the World Heritage listing of the Naracoorte Caves Conservation Park, the author used the phrase "pure serendipity" to describe the event. I think that the story is worth telling again. It exemplifies that exploration and discovery is an ongoing process rather than a happening. We do it not just because it is exciting to discover things, but because, admittedly for some of us more than others, it is an innate part of our being which helps us to appreciate and better understand what we've already got. We can no more deny the validity of cave exploration than we can wish that the Earth was flat and our doctors still relied on leeches. I remember vividly sitting in the old Naracoorte Hut, looking at Sexton's map of Victoria Cave and noting some small crawlway passages that I wanted to check. My main interest in caves has always been systematic exploration. I visited the cave on that Sunday morning for the express purpose of checking two crawlways and looking for more cave. I began my examination of the first crawlway while the rest of the party went to look at the south extension of the cave. Rod Wells and Bob Henzell said that they would check

up on me and give me a hand on their return. In that crawlway I had felt a breeze which encouraged me to pull some small rocks out of a rock-choke. Progress was quicker than I expected and after a short time I was able to squeeze up a slot into a large chamber. I had a brief look around the chamber and noted a piece of interesting bone, a very distinctive portion of the lower jaw of *Thylacoleo*, at the time extremely rare but unmistakable even to someone with only rudimentary knowledge of paleontology. I went back to tell the others of my breakthrough. By then the rest of the party was leaving the cave. Rod and Bob were pulling a few more rocks out and coming up the slot behind me. I was thin then. The three of us sat quietly for a while and contemplated what was even then clearly a significant bone deposit. It took time to comprehend that many of the dusty shapes on the silt bed stretching in front of us were not pebbles, but segments of bone protruding through the surface. It was really weird. It was almost as if our eyes and brains were playing tricks on us. I remember being excited by the discovery, but I think that Rod had a better understanding of its enormous potential. I've always wondered since whether he knew even then that he was looking at the rest of his life's work.

Of course I get great pleasure from the fact that I instigated the examination of the crawlway, and I actually pulled out the rocks which enabled us to gain access to the new section of the cave, but although the dangers were slight, I would not have started the push without the back-up of Rod and Bob. It was a team effort, and once we were sitting in the chamber assessing what we had found, it was still a team effort. It was good fortune that although I could identify some of the more obvious jawbones, Rod and Bob were both zoologists, and Rod in particular had even at that time a strong interest in paleontology. Had none of us had any expertise in that field, we would have had to find someone who had, just as Rod since that time has invited experts in other facets of cave science to assist in building up the full picture.

I hope that from what I have described, it is clear that the events are just part of an ongoing process of learning which began long before I pulled some rocks out of a crevice, and is still continuing today. We are all with our own areas of expertise piecing together a giant, open ended jigsaw puzzle. Cave managers are as much part of the discovery team as the paleontologists, the paleochemists, the diggers, the surveyors and all the others who contribute to the progress of the search for understanding.

Serendipity had little to do with the World Heritage listing of the site. I'd say that was due in large measure to the recognition by park management of a quarter of a century of hard work by Rod and others, and his inspirational leadership of a dedicated team investigating the site with a combination of painstaking care and intelligent analysis, encouraged all the while by an enlightened approach from management, beginning with the late Ern Maddock twenty-nine years ago and further developed by Brian Clark to the present day. Brian's role in the World Heritage listing process has given him additional management responsibilities and a budget that others might dream or have nightmares about. Most of us think that we'd like to lie awake at night wondering how to spend a few million dollars. Brian can tell us whether it's really that much fun.

We've had some amazing discoveries at Naracoorte, and apart from their intrinsic scientific value, they are very important in generating public support for conservation of caves. To most people, even if they break out in goosebumps at the thought, caves are associated with the romance and mystery of exploration, and discovery of the unknown. There's already a fascinating story being told and the book is far from fully written. There is much more to discover and to learn, so we'd better strive for a balanced management strategy that both encourages and protects. and while a bit of good fortune is always appreciated, my old report card writing teachers were quick to drum into me that success is 1% inspiration and 99% perspiration.