

6TH AUSTRALIAN KARST STUDIES SEMINAR

- Kent Henderson

The sixth event in this series was held at Wellington Caves, New South Wales, from Friday 4 February until Monday 4 February. The program and field trips were arranged by Mia Thurgate and Ernst Holland, with the Seminar itself organized by the Wellington Shire Council. It was a superbly run event, to say the least. There were over fifty registrants, a significant number of which were post-graduate tertiary students. Of course, this is generally the case, and one of the main rationales for these seminars is to allow students to showcase their work in various aspects of karst science, in an informal manner. A significant number of registrants were, coincidentally, ACKMA members. I drove up from Melbourne in the company of ASF Vice-President Arthur Clarke, and his partner Robyn Clare, whom I'd gathered up at Melbourne airport on my way north. We were in for a wonderful few days....

FRIDAY, 4TH FEBRUARY

After a "formal" welcome from the Wellington Shire Council, the first morning session was to see four papers presented. The session began with Campbell Gregory, a former Wellington Mayor, and doyen of the development of the Wellington Phosphate Mine. His paper: *A Council perspective and history of development of the Wellington Phosphate Mine as a tourist attraction* provided an excellent introduction to the Seminar. Dr. Armstrong Osborne followed with his scene-setting paper: *Geology of the Wellington karst area*. This paper can found later in this Journal, as this edition's *Andysez*. After morning tea, Mike Augée, who is currently the main palaeontologist working at Wellington, delivered *Palaeontology of Wellington Caves and Phosphate Mine*, which gave an excellent summation of fossil discoveries in the area. Finally, the Council's planner, Sid Craythorn, gave us *Planning issues and karst*, a perspective of council's approach to issues.

The afternoon saw our first field trip, with visits to the local surface karst, Cathedral Cave, and the Phosphate Mine. I last visited the Phosphate Mine a few years back when it was half complete, and this was first visit since it was completed and opened to the public. As those would have bothered to read my ranting in this Journal over years may have noted, I am not renowned for pulling punches when it comes to critiques on cave developments. In my years of looking at tourist caves across Australia, New Zealand, Britain, Europe and America, I have invariably noted at least something, often much, to take a baseball bat too.

...and so I visited The Phosphate Mine. Well, despite valiant efforts (I do have this sordid critical reputation to uphold, after all) I could find no fault! What a superb development, from tracking, to the historical lighting, to the interpretation, to the engineering and mine construction – even the fluorescent lights to highlight the luminescence of the phosphate. This was as good a development as is possible to get, in my mind. The attention to detail, the obvious deep thought that had gone in to every aspect of this project, as incomparable. I was quite stunned. As I said at dinner that evening, it reflects very much the visionary outlook of the

Wellington Council which, to my mind, has proved itself an exceptional cave and karst manager.

The visit to Cathedral Cave was also interesting. It was looking as tired as ever, with its greatly out-dated infrastructure. However, its re-lighting and rehabilitation is now the Council's new No. 1 priority, and I am certain, given its past form that once complete it rate with the Phosphate Mine. The afternoon finishes with a brief tour of Wellington Fossil Study Centre, wherein Mike Augée explained recent finds and research.

SATURDAY, 5th FEBRUARY

First up on Day 3 was Sue White's offering: *Models of speleogenesis: A review* – a fascinating look at various karst-creation theories. Ken Grimes followed with his *Karst of Christmas Island (Indian Ocean)*. It was a wonderful paper on a little known location, apply illustrated with excellent photos and diagrams. Next up was a paper by John Webb, Ken Grimes, Roland Maas & Russell Drysdale entitled: *Origin of cenotes near Mount Gambier, South Australia* – again amply illustrated. After morning tea, we were favoured with: *A comprehensive approach to marble erosion modelling* by Paula Avramidis & Julia James. It was presented by Paula (a PhD student) using powerpoint. The quality of the paper, and the presentation itself, was quite exceptional, and her work on modelling marble erosion, largely working on graveyard head stones, was extremely fascinating. Next to present was Jeremy Chase, David Stone & Julia James who favoured us with *Condensation corrosion in tourist caves, case study: Jenolan Caves*. Again, other great presentation, this time by Jeremy, another of Julia James's students.

At he afternoon saw field trip to Borenore Caves, preceded by roadside viewings of various other local karst features. Borenore is now managed by the Jenolan Caves Reserve Trust, with Mick Chalker as caves manager (as he concurrently is of Wombeyan and Abercrombie Caves). I had personally visited Borenore twice before, and it was interesting to wander around and gain the impressions of first timers – one of whom, I found to my amazement, was Elery Hamilton-Smith! As those who have been to Borenore will know, is Arch Cave is quite stunning.

SUNDAY, 6th FEBRUARY

The initial paper on Day 3 was from our old friend, Henry Shannon, who gave us *Flood effects in McKeowns Valley and Mammoth Cave, Jenolan Caves, N.S.W.*, detailing his past hydrological research at Jenolan over a great many years. Henry was followed by Stan Lithco & John Webb who presented *Changes in karst water chemistry at The Black Hole, Lower South-East, South Australia*. The paper was well delivered by Stan, a Post-grad. Student of John Webb at La Trobe University. Two more excellent scientific papers follows, again well presented by students: *Palaeoclimatic information from biominerals in Odyssey Cave, Bungonia*. - Annalisa Contos, Julia James & David Stone, and *Local climate reflected in radon concentrations in the Temple of Baal, Jenolan Caves*. - Stewart Whittlestone, Wlodek

Zahorowski, Michael Hyde, Julia James & Craig Barnes. This was followed by Neville Michie's interesting offering: *New concepts from cave atmosphere studies*, based on his work at Jenolan. The final paper for the day, with considerable cave management implications, was from Craig Barnes, Julia James & Stewart Whittlestone, entitled *Radon- Is there a need for badge programs?*

The afternoon saw us visit nearby Molong to inspect the local Lime Quarries. As quarries go, this was a very good operation, with a great deal of resources expended on dust mitigation and other environmental programs. The quarry is owned and operated by the Molong Council, thus effectively given the local community an effective say in management, as well as locally-significant employment.

MONDAY, 7th FEBRUARY

Our final morning saw another six papers, mirroring the quality of their predecessors. The session was quite unique, as all papers were presented in the main chamber of Cathedral Cave, creating a definite ambience! First up was Elery Hamilton-Smith with his paper: *The Prominence of Jenolan*. Brilliant as ever, the paper looked at management at Jenolan past, present and future. Elery had some very definite comments to get across, and doubtlessly more will emerge in the future. Ernst Holland and Mia Thurgate followed with *What we do inside Caves*, an fascinating exposé on their doings at Jenolan. Liz Reed and Steve Bourne then gave us *Pleistocene fossil sites of the South East of South Australia, with a particular focus on the Naracoorte region and the World Heritage Naracoorte Caves*. Profusely illustrated with photos (as many papers were) it provided a great perspective on this wonderful karst area.

After morning tea, we were favoured with a paper from Alison Downing, Ron Oldfield & Patricia Selkirk, entitled: *Karst landforms in the south-east of South Australia: Refugia for rainforest bryophytes from the Tertiary?* As one would expect from three world experts in their field, it was stunning, as was Alison's presentation, and Ron Oldfield's incredible photos that accompanied it. Alison was followed by Mia Thurgate presenting *Diversity at depth: The NSW cave invertebrate story* (Mia Thurgate, Andy Spate and Alexander Herr) – a wonderful look at recent cave “creepy crawly” work in New South Wales, presented in Mia's usual bubbly style! The final offering

of the Seminar was Steven Bourne's *Presenting World Heritage Values to the Visitor*. Steve is Brian Clark's “second-in-command” at Naracoorte Caves, and interpretive work at Naracoorte explained in this management-related paper was wonderful stuff indeed (Steve's paper is printed elsewhere herein).

After lunch, most attendees departed. Arthur Clarke, Robyn Clare and I did likewise. We had been invited to go caving at Cliefden by the Orange Speleological Society's Bruce Howlett – an area none of us had been to before. Together with Jane Gough, who accompanied us, we were first given a tour of the stunning surface karst, followed by four hours underground in Main Cave. While muddy underfoot (to say the least) and relatively “sporty”, Main Cave possesses many areas of significant speleothem development and some very fine features. The Orange Speleos effectively manage Cliefden Caves and control access on behalf of a few local landowners, with whom they have excellent relations. The management, both above and below ground was, in our view, excellent. Many thanks Bruce, for a most stimulating afternoon.

That evening, the Clarke's and I stayed overnight at Abercrombie (thanks Mick Chalker and Barry Cubitt!). Arthur had never been to Abercrombie before, and we did a quick tour through its 221 metre Grand Arch first thing the next morning, prior to heading back to Melbourne and Arthur and Robyn's plane back to Hobart. Arthur was most impressed with both the Grand Arch, and its management, like many before him!

Overall, it was a tremendous seminar, with every paper (and I mean that) of very great quality. Many thanks Mia, Ernie, and the Wellington Council for a flawlessly organized event!! The abstracts will, in due course, appear in *Helictite*, and as will be noted a couple of papers have found their way into this Journal. Somehow, during the Seminar, a reporter from the local “Wellington Times” collared Henry Shannon and I (we were doubtlessly in the wrong place at the wrong time!), and we subsequently achieved “instant” fame on the front page of the said newspaper, accompanied by an extremely *flattering* (!!) photo. We did say a lot of nice things, and we meant every word of it. The article is adjacent.