

CEGSA NEWS

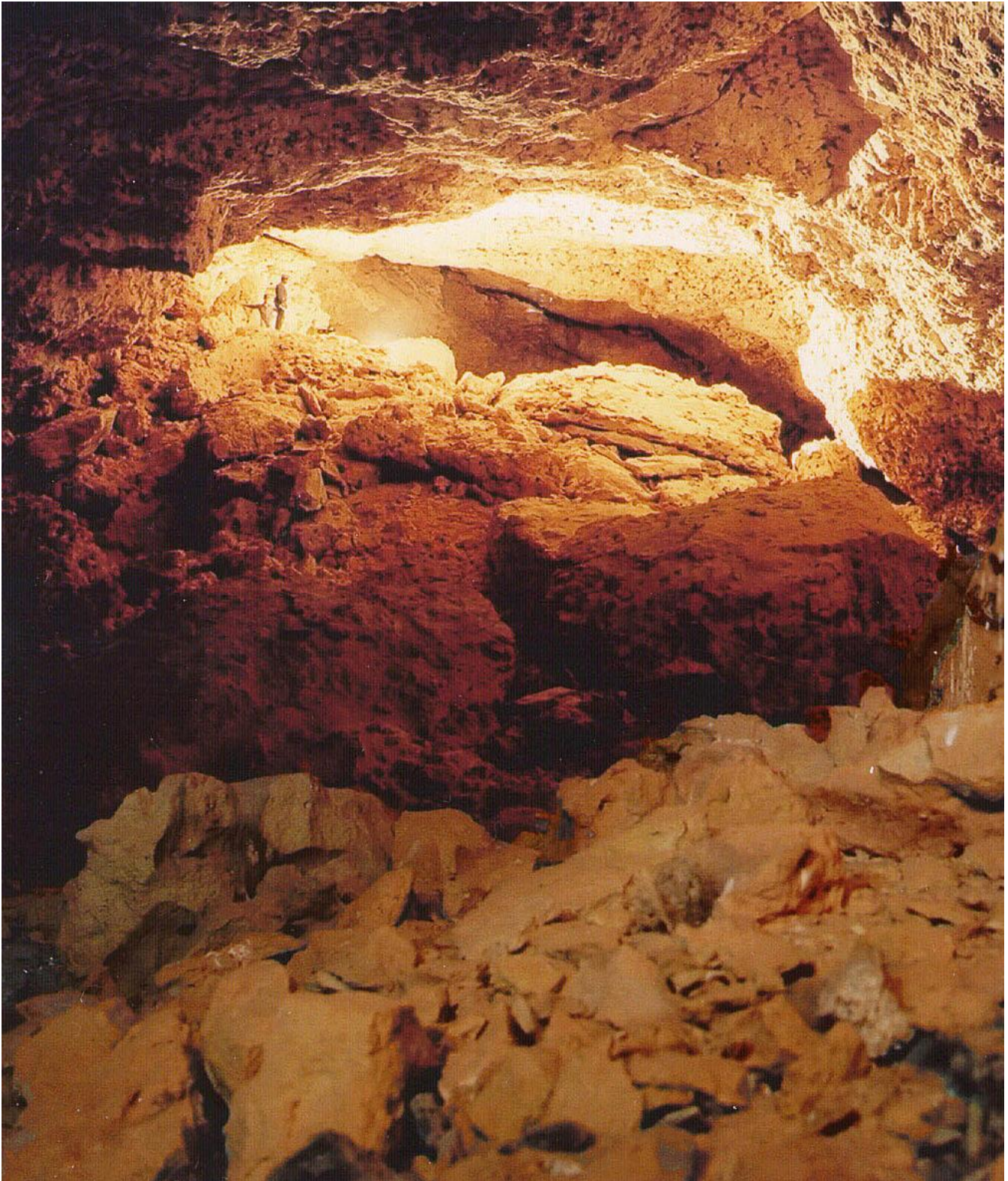


Newsletter of the Cave Exploration Group (South Australia) Inc.

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CAVE EXPLORATION GROUP (SOUTH AUSTRALIA) Inc.

PO Box 144, Rundle Mall, Adelaide, South Australia, 5000.

<http://www.cegsa.org.au>

Meetings held on the fourth Wednesday of each month, except December, at 7.30 PM usually in the Royal Society of South Australia meeting room, Natural Science Building, South Australian Museum.

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Cover Photograph: Flightstar Cave (N-2098), looking SW.

Photo: Peter Ackroyd, 10 July 2002

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QUARTERMASTERS NOTE.

High usage equipment will now be stored at the quartermaster's residence. Please make arrangements with the QM well in advance of required date for equipment. The QM can be contacted at the telephone numbers on the previous page.

NEWSLETTER MATERIAL

The deadline for copy or background material for Volume 52 Number 1 (Issue 205) must reach the Editor by Wednesday **14th FEBRUARY 2007**. Material not meeting this deadline may be retained for possible use in a following issue. The preferred method is via E-MAIL to atholjax@adam.com.au as an attachment or on 3.5" IBM floppy disk, or on a CD, in Word or ASCII text format. Of course other forms of communication will still be gratefully accepted. Photographs are preferred to be in colour (jpg format) and not embedded in the text..

The views expressed in this publication are those of individual authors and not necessarily those of the Cave Exploration Group (South Australia) Inc., its Committee or the Editor.



PRESIDENTS SPOT

Speleology: the science of the cave environment.

ASF Conference: the sharing of Australian Speleology, Past, Present and Future.

Well the year has passed all too quickly by, and sadly, so have the rain clouds.

I was driving with my family the other day on our way to catch the Kangaroo Island Ferry. There was general kid chatter in the back as we climbed a hill with a setting sun to our West. Six year old Tim suddenly piped up "there is a cave underneath us". We had just passed the entrance to the quarry on Sellicks Hill. I was astounded. Tim had been caving with me in a number of places but hadn't been over this ground with me before. He saw the rock face and smelt the limestone (must be in his genes!!) and correctly surmised that we had been very close to one of the most spectacular caves (A20) that I have ever seen anywhere.

Caving is all about enjoying many of the fun aspects of caves and with a like minded group this is what we wish to foster in CEGSA. It is about making the effort to find and explore, to chat and discuss. It is about having a BBQ with the cave managers and discussing a range of issues. It is all about getting back to our digs and pushes in caves that we haven't seen for 20 years or more and are there as we left them. It is about grumbling about changes and policies and reminiscing on the good old days. But it is also largely about promoting caving amongst our children and their friends to train up and apprentice new cavers.

CEGSA has the greatest potential of all the Cave Groups in this country because it DOES introduce large numbers of impressionable school children to the realm of adventure caving at places like Curramulka and Naracoorte. Some of the kids are going to let their adventurous enthusiasm germinate and continue caving at a later time. Let's be ready to assist and nurture them.

So we have tasks and projects to advance:

We have a mighty Conference to host at Mt Gambier,
We have the Caving history to document and reflect upon,
We have the Future of caves and cavers to develop and protect,

Cave on.

Stanley C Flavel

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LETTER TO THE EDITOR

G'day Athol

Just a quick Email

I would like to thank Fred ASLIN - Ian LEWIS - Kevin MOTT - Peter HORNE for helping me in my early years as a Casual Cave Guide at Tantanoola Cave.

When I first started work at Tantanoola Cave I knew very little about Caves. At that time, 1980, John Callaghan was the Manager working for Millicent Council. The Tantanoola Cave was up-graded to Wheelchair access in 1982 and early 1983. I remember the date of the re-opening was 17th January 1983 (My sons Birthday). Then the National Parks and Wildlife Service started to Manage Tantanoola Cave.

I joined CEGSA and have been a member for just over 20 years.

I retired in 2004 as "My knees finally wore out" as I could not perform full First Aid Duties e.g. Resuscitation, cannot kneel anymore. Not all fault of Caving. I was also a Life Line Volunteer Cave Guide at Englebrecht Cave in Mount Gambier.

Need to thank the Cave Diving Association of Australia for their help too.

CEGSA members were very helpful with information and I acquired a tremendous amount of knowledge and details about Caving from the Group, useful to pass on to the Public.

So this is to thank Fred ASLIN - Ian LEWIS - Kevin MOTT - Peter HORNE - must also thank that Englishman Graham PILKINGTON and yourself too, Athol JACKSON.

I am sure I have missed many people who helped me over my 24 years at Tantanoola Cave
Consequently any persons who helped me "along the way in Caves ' THANKS.

Best Wishes to all Cavers, hope to get to the Conference one of the days early next year.

Ben & I are now retired and Pensioners at Southend SA.

Yours in Caving,

Bridget Wilkinson.

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TRIP REPORTS

Megafauna in the Nullarbor — April and July 2002

by Peter Ackroyd

Trip dates: 9 April – 2 May 2002 and 3 July – 22 July 2002.

Introduction

This is the story of a once-in-a-lifetime discovery — the finding of three caves containing a treasure trove of megafauna fossils (the giant Australian marsupials, reptiles and birds which died out over 50,000 years ago). Due to security requirements (all fossils have now been removed under the oversight of the Western Australian Museum), I have held off publishing a report on these two trips until now. I keep detailed diaries of all my trips and so what follows is based on my contemporaneous notes.

The third annual, flight-based trip to the Nullarbor, led by Ken Boland in his marvellous flying machine (a “Flightstar” ultralight aircraft), commenced on 9 April 2002 and finished on 2 May 2002: an unforgettable trip by all who attended.

Ken’s method of grid-flying the Nullarbor Plain in his ultralight aircraft and logging potential karst features on his GPS is described elsewhere (Ackroyd, 2005). In that respect this trip was no different, except that we had moved the search area to be based around “Last Tree Camp”, located south of Old Homestead Cave.

Part I: Discovery

Leaving Adelaide on 9 Apr 2002, Ken and I, towing the ultralight in its long trailer, made our leisurely way in hot weather to our planned evening camp beyond Kimba, South Australia. In the late evening we were joined by Ray and Chris Gibbons, who were guided by our flashing red LED light by the roadside. We enjoyed our first night around the campfire with plenty of chilli stir-fry and a bottle or two of wine. We also enjoyed the sight of approaching thunderstorms; little knowing they would prove to be an early feature of the trip.

We passed through Ceduna the next day, picking up our allotted block of cave numbers from Nullarbor records keeper, Max Meth, before continuing to our next camp on the Old Coach Road, near N-264 and N-265, where we planned to do a bit of work for a couple of days. I was enjoying camping under the stars, until I awoke on the second night to the mother of all thunderstorms.

Hanging on grimly to the edge of my groundsheet, flipped over to afford some shelter from the bucketing rain, I was able to prevent it from being blown away into the next State, but only just. In a lull between overhead explosions of light, sound and drenching rain, and with Ken having already commandeered the cabin of the Rodeo utility, I threw myself on the mercy of Ray and Chris in their trailer tent where I received a warm welcome, partly so that I could act as an anchor for the far end of the trailer tent before it became airborne.

The roads were now very wet. Ray and Chris continued along the Old Coach Road whilst Ken and I, towing the ultralight in its trailer, continued along the highway to reunite in Eucla, Western Australia. From Eucla we made steady progress up to Kuthala Pass where we assembled the ultralight plane.

On 13 April Ken flew the ultralight up to our selected campsite whilst I towed the trailer, now filled with firewood, up the treacherously slippery roads to meet up with Ken. Ray and Chris acted as my backup and reported some “interesting moments” from their vantage point as I nursed the ungainly trailer through the muddy pools and quagmire roads to our camp. At one stage I “enjoyed” a driver’s-eye-view of the trailer from a hitherto unseen angle.

Arriving, against all odds, in one piece we set up camp for our three weeks home from home, where we were joined by some other members of the party — Paul Devine and Eve Taylor, Daryl Carr and Marg James and Nick White.

The following day (14 Apr 2002) was our first serious workday. Ken took off for his first grid search flight and Ray, Chris and I walked three or four kilometres south to commence "ground proofing" Ken's logged points.

We immediately found significant features, not all of them spotted by Ken, hinting at a busy time ahead. The principal finds were a series of rockholes on a pavement area. The rockholes appeared to have been used by rabbiters or travellers as a water source in the past, because adjacent to the rockholes was an old 1.2 metre riveted wrought iron cubic water tank. I tagged the rockholes 6N-2096. Another find was a 100 metre plus cave that Chris aptly named "Fly By Cave", tagged 6N-2097.



Chris Gibbons at old water tank, Ray Gibbons next to rockhole N-2096 (viewed looking west). Photo: Peter Ackroyd, 14 April 2002

Paul and Eve had led the other party up the road to the north to look at features Ken had logged on the previous year's trip. That evening, after a big satay chicken stir-fry, we sat around the fire enjoying the feel of the Nullarbor, accompanied by the odd glass of something. In the morning I arose early to make a big damper then I set to work documenting yesterday's discoveries. This was to be my routine for the next couple of weeks.

At this early stage, we found a difference in philosophy between ground parties. Ray, Chris and I preferred to follow up ground features in a systematic fashion; while others preferred to "go for the stars" (Ken's

method was to mark major features he'd spotted with asterisks or 'stars').

This very day (15 Apr 2002) was about to make us pleased we were following our systematic approach to documentation. We started out by following an old track to the west that I had been on in 1994. I knew it led into part of Ken's current search area and reasoned that it would prove to be a useful access route for us. Soon however, the track became too faint to see, even when on foot. Fortunately I had logged the route on my GPS from 1994, so we were able to continue following it, using GPS navigation alone.

After several kilometres of slow driving in Ray's Holden Rodeo utility, we were approaching one of Ken's aircraft features logged by him as "doline, small". Ray was able to manoeuvre around tyre-wrecking bluebush patches to within a short distance of the feature, then walked over to it to find, indeed, a small doline, containing a huge thorn bush, which was covering a blowhole, from which issued a howling gale. Ray suggested that Chris and I should join him and we were equally astounded that such a small doline could contain such a feature. The wind noise was such that it could be heard 20 metres or so from the blowhole.

The first task was to tag it (6N-2098) then to remove the enormous thorn bush. When we did, it revealed the fact that half of the bush had been growing down the shaft itself, blocking some of the airflow and making it impossible to see down the blowhole to determine its nature. After these initial efforts, the thorn bush was now no longer connected to anything and was too deep within the shaft to be easily reached from the surface.

I was able to free climb down the shaft for a couple of metres then, with some discomfort, squeeze past the thorn bush, all the time with my eyes shut to keep the wind, grit and dust out, till I was able to get below the obstruction, about five metres down the shaft.

Switching on my head torch and looking down I could see that the shaft continued for a couple more metres then opened into the roof of what looked and sounded like a large chamber. I estimated that the total pitch depth was about 15 metres. It was immediately obvious that this was a significant cave.

Climbing back up past the thorn bush was no less painful, but with a big cave waiting to be explored I barely noticed. Ray, Chris and I had a discussion right there at the pitch-head. We decided that Ken should have the privilege of being the first person to explore and name this new cave.

So, we returned to camp that night and managed to have a quiet word with Ken along the lines of, “we don’t think the weather will be right for you to fly tomorrow.” Ken’s reply of, “Oh?” was followed by a suggestion that since the weather was not going to be right, he should join us on our “ground search” trip instead. Ken is not slow on the uptake: it was arranged for the next day.

The other party had explored one of Ken’s “star” caves to the east (N-2201) and were wholly taken up with regaling us with tales of adventure and derring-do. We were required to do no more than just sit quietly and listen.

Later that evening, Tom Porritt joined us. He’d left Victoria a little later than the main Victorian party and had made his own way to the campsite.

Next morning Ray, Chris, Ken and I drove out to N-2098 along the newly marked track from yesterday (which already was making the journey much easier and faster). The removal of the remaining thorn bush jammed firmly on the shaft was not simple. Climbing down to it and attaching ropes was the easy part. With three of us pulling on different ropes, and in a cloud of dust, twigs and grit, we eventually pulled it out, Chris capturing the moment on film showing a volcanic blast of debris driven up by the cave’s enormous draft.



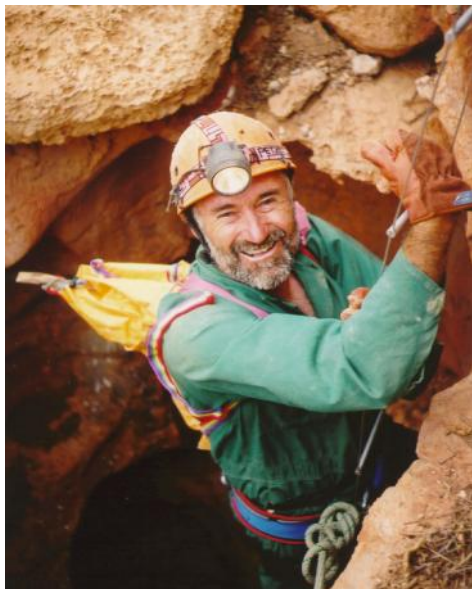
Ken Boland (left), Peter Ackroyd (centre) and Ray Gibbons (right) opening up Flightstar Cave (N-2098). Photo: Chris Gibbons, 16 April 2002

I rigged the pitch with a ladder and tied myself into the anchor to act as the belay man. Ken was already in his harness. Before he departed for the depths he said, “If this cave turns out to be any good I will name it ‘Flightstar Cave’”. He’d been waiting ages for a chance to name a significant cave after his beloved ultralight aircraft.

Ken descended and I belayed. Ken called “off rope”.

I suggested Ray should go down next to join Ken. Ray suggested I should be the one to join Ken. There was a brief discussion. (Ray had always shunned any “cherry picking” approach to this sort of work and here was an unexpected “cherry” that I thought Ray deserved to pick). Fortunately Ray relented and followed after Ken. Ray’s skills in palaeontology are greater than either Ken’s or mine and so this moment was to prove pivotal in what followed.

Chris and I waited at the top in the early afternoon sun — which gradually became the late afternoon sun. There was one interruption to our autumnal contemplations — a call for a camera, quickly dispatched, via the rope, to parts unknown down below.



Ray Gibbons emerging from Flightstar Cave (N-2098) after his discovery of complete skeleton of a marsupial lion (*Thylacoleo carnifex*). Photo: Peter Ackroyd, 16 April 2002

In the early evening they emerged, grinning from ear to ear. Flightstar Cave was quite big, had two good leads, was still going but best of all, there was a *Thylacoleo* skeleton down there in a quiet little alcove lying completely undisturbed, looking as if it had died there a decade or two ago. *Thylacoleo carnifex* has been extinct for over 50,000 years!



Undisturbed skeleton of *Thylacoleo carnifex* in Flightstar Cave (N-2098). Photo: June MacLucas, 10 July 2002

Photographs had been taken but, because Ray was able to identify it so quickly and positively, nothing had been touched. It remained undisturbed. We had to make a decision about what to do. Ray and Ken suggested I should go down to see for myself but I thought the less disturbance the better.

Back at camp we drew aside Paul Devine, the other documentation person, to discuss with him what we should do about our discovery. Astonishingly, Paul also had some news — a cave he'd found with Eve the day before had turned out to be of significant size, and contained remains of Thylacine (Tasmanian tiger) and possibly Thylacoleo.

Paul's opinion was that we should say nothing at all about our discovery in N-2098 at this time, to anyone. A complete, undisturbed *Thylacoleo carnifex* skeleton was of national significance and any risk that the information could leak out before the skeleton's recovery by the responsible authorities must be minimised. Even so, I have to confess to being a little taken aback when Paul asked for my field book and proceeded to erase all location information from my notes for N-2098. He had already done the same thing for his own palaeontological cave, N-2200. (Later events would prove Paul to have been a realist and me to have been somewhat naïve. A few days after the trip, in early May, I attended a talk by the Geological Society of Victoria in Melbourne Museum to be astounded to overhear (as did half the room) one of the individuals who had been on Paul's exploration trip telling a group of geologists of his adventures in the Nullarbor and how he had found fossil material of Thylacine and Thylacoleo.)

After this it was back to normal — almost. Strangely, Chris didn't wish to come out on the road the next day. Usually she was keen to do a "Priscilla of the Desert" on the back of the Rodeo utility, spotting features as a result of the extra elevation. Ray and I continued to push along the, by now, completely overgrown track to the west, tagging along the way N-2099 through to N-2101. The first two of these features were quite large.

Upon our return to camp I was astounded to see hundreds of tiny flags flying — bunting lines erected around the camp. Chris, dressed in a chef's outfit, ushered me to a central table in the camp, surrounded by candles and decorations. On the table was a specially made cake featuring icing blowholes and caves (with chocolate tags). I was to turn 50 in a month so Chris and Ray, along with the absent June MacLucas, had cooked up this surprise party for me out in the Nullarbor.

The next day (18 April 2002) we awoke a little late. Eve had to return to work as a cave guide at Yanchep, north of Perth, so she and Paul left about midday. Ray, Chris, Tom and I left to continue pushing the track west, reaching a rather overgrown main north-south track that linked to Moodini Pass. We had pushed the track to be 25 kilometres long. We also documented more features and Tom explored N-2099 finding it to be a good little cave, 14 metres deep and at least 75 metres long. Close to this cave I found the remains of a broken bottle and some hardened ground. Later analysis showed this cave to have been on a very old track, now totally invisible, along which the Western Australian geologist, David Lowry, had travelled in the early 1960s. He had noted the existence of, but had not explored, this feature.



Tom Porritt on his track-seeking bicycle.

Photo: Peter Ackroyd, 22 April 2002

A little further west we found another old track, barely visible, also running roughly north-south. We returned to camp, now an hour's drive away along our east-west track, which was becoming quicker to travel as it became better defined.

Tom, Ray and I didn't get away until noon the next day. Documentation duties were taking up to three hours now that Ken was in his stride, often logging 30-40 new points each day. We continued re-establishing the old tracks, allowing us to reach Ken's points out on the bluebush ridges and saltbush pans. Tom did sterling work on his bicycle, carrying a two-way radio and spotting the track for those in the vehicle.

Jake Turin from the USA arrived in camp on 20 April 2002. The importance of proper documentation was reinforced on this day. The other team had “found” a blowhole right alongside a track and had decided to tag it with a new number without checking the records. It was N-717, an existing, recorded feature. Consequently, the next day we had a long drive to “untag” the feature and apply the correct number. Tom, Ray and I then continued to re-establish the southwest track to properly locate and to tag an existing feature, N-343, and to locate and tag more of Ken’s points. The loop we had driven on this day was 56 kilometres. On the way back to camp we saw four bustards (*Ardeotis australis*).

There was one more surprise for us. Ken had decided to save for himself one of the caves he had spotted from the air. He had partly explored it the day before and had found it a bit dangerous on his own. So, on 23 Apr 2002, a large party joined Ken at Last Tree Cave (N-2121) for a look. Once again Ray’s palaeontological expertise was useful, finding several bones of Thylacine and yet more Thylacoleo. This cave ultimately proved to have an abundance of megafauna remains in it. However its entrance was a sloping crawlway — not your classic animal trap of a shaft dropping through a roof. I decided to poke around. The first thing I noticed was the recent nature of the current entrance. Red stained rocks and loose soil around it suggested to me it was a fresh opening, perhaps less than a few decades old, certainly less than 100 years. Inside the cave I looked for an alternate entrance, which I soon found, tucked up on the left-hand side. It was a relatively freshly blocked shaft, 0.85 by 0.65 metres in size.

Further evidence that this was the original entrance was the numerous scratch marks in this area as the animals that had originally fallen down the shaft attempted the impossible task of reaching a roof over their heads to re-enter the outside world. The fall from the surface was only three to four metres — far from lethal. It meant they were trapped, only to die in the lower parts of the cave. One section of water-washed passage was to be later called “The Ossuary” due to the vast number of bones washed down into it. That evening and the next morning we had thunderstorms, dumping about 10 millimetres of rain on us.



Stone arrangement at medium-sized rockhole N-2120. Photo: Peter Ackroyd, 25 April 2002

Because of the rain we were mostly restricted to walking. Ray and I walked to an interesting rockhole (N-2120) that we discovered had a line of ancient, lichen-covered stones next to it. Taking a bearing on the line of stones we found that it was pointing to a major rockhole complex 12 kilometres away, about a day’s walk in harsh conditions. The line of rocks was so accurate it was within a degree of the correct bearing to the major rockhole complex — a remarkable feat for a people without compasses who had to rely solely on superb bushcraft and eyesight.

Paul returned from Yanchep after having dropped off Eve, arriving mid-afternoon after a long drive on wet tracks. On 26 Apr 2002 the other-team headed off to do some touring at Mullamullang Cave (N-37) leaving five of us to carry on the work at Last Tree Camp — Ken, Ray, Chris, Paul and me.

Trips out from camp were now over two hours long to the “work face”. Distances were typically 30 to 40 kilometres over tracks that had barely existed before we had remade them. Apart from tagging Ken’s features found from the air, we were able to properly record little known and poorly documented features such as N-343 already mentioned, and a large doline N-1243 in an unlikely position on top of a ridge. Paul, likewise, relocated rockhole N-690 beside the main road and was able to record the correct coordinates for it.

By 29 April it was time to end the trip. Paul headed off for Loongana. Ken carried out his last flight while the rest of us packed up the camp. Ken flew south in the afternoon for Kuthala Pass where we joined him very late in the day to help him disassemble the ultralight and to pack it into the trailer I had towed down.

The trip was not quite over though. On the 30th April we tagged our last cave, a blowhole (6N-2137) barely inside the border of Western Australia.

On 1 May 2002 we reached Ceduna to hand over our field data to Max Meth, the Nullarbor records keeper. We had collected data on 97 new caves and revised data for 6 existing features. We arrived in Adelaide on 2 May 2002 to spend an evening at June and George MacLucas' place belatedly celebrating June's birthday, and our amazing palaeontological discoveries. It was a late night.

Part II: Bone Recovery

A few days after our return from the Nullarbor, on 9 May 2002, Ken and I took the photos made of the skeleton in Flightstar Cave to Dr Tom Rich, vertebrate palaeontologist at Museum Victoria. Tom confirmed Ray's provisional identification — we had found a complete *Thylacoleo carnifex* skeleton. Tom also confirmed the correct procedure was to get in touch with the Western Australian museum authorities, but he also said, "if they are not interested in recovering the skeleton then come back to me, because I certainly am".

An approach to the Western Australian museum was made, accompanied by scans of the photos, through CEGSA's South Australian Museum representative, Terry Reardon. The response from the curator of the vertebrate palaeontology at the Western Australian Museum, Dr John Long, was immediate. Ray Gibbons, as go-between, was deluged with phone calls to ask how soon we could leave on a trip to the Nullarbor in order to guide a Western Australian Museum team to the three caves to recover the bones. We'd only just come back!

A flurry of phone calls from 17-20 May and all was arranged. The recovery trip would be in July 2002. The caving team would consist of the discoverers, Ken Boland, Ray Gibbons, Paul Devine, Eve Taylor, and myself, Peter Ackroyd. In addition June MacLucas was invited to be the official cave artist. She was to be accompanied by her husband, George.



June MacLucas (drawing) assisted by George MacLucas, preparing artwork in Last Tree Cave (N-2121).
Photo: Clay Bryce, July 2002



Thylacoleo Skull in Flightstar Cave (pastel and pencil).
Artist: June MacLucas, 2002

The Museum team was led by John Long. He was joined by palaeontologist Dr Gavin Prideaux, who was then at Flinders University and was a recognised specialist in Australia's megafauna. The Western Australian Museum has a policy of sending administration staff out on fieldwork for them to see what it is really like. So, Nick Mayman, Director of Corporate Services, also joined us, along with the museum's documentary unit (Clay Bryce and Dan Searle) and museum volunteers Lindsay Hatcher and Mark Norton.

June MacLucas has given us a summary of this part of the trip (MacLucas, 2002) so only a few additional points will be recorded here. Ken and I, in the vanguard for a day or so of touring, left Adelaide on 3 July 2002. We were to meet June and George, Ray and Gavin at Ceduna on 5 July. That meeting was delayed by three hours as a trailer being towed by the second vehicle had to have a wheel replaced. It had sheared the wheel studs and so needed a new hub. Fortunately, one was available in Minnipa.

At Eucla on 6 July 2002 we met the Museum team where they had very kindly arranged for us to stay the night at the motel. Clay and Dan began filming us for the museum's documentary about the discovery.

Arriving at Last Tree Camp the following day, and after setting up our own tents, we helped erect the museum's two enormous marquee tents. The plan for the next three weeks was to survey each of the three caves, collect as much bone material as possible from them and to take samples of the sediments under the bones — especially from under the undisturbed Thylacoleo skeleton we'd found in Flightstar Cave.

The first workday, 8 July 2002, was spent in Last Tree Cave (N-2121) as it was the most accessible. It required no vertical work due to its recently opened side entrance. I was able to commence the cave survey with Ray Gibbons and at the same time point out to the museum team the original animal-trap vertical entrance, now blocked by a big boulder and some soil pushed in by a bygone flood. Any animal falling down that hole would have only a few metres to fall allowing the trapped animal to live and subsequently wander off to die of thirst or starvation lower in the cave. As mentioned in Part I, many of the bones were subsequently washed down to the "ossuary" — an immense collection of megafauna bones in a low, water-washed chamber.

Because the cave had been closed for a period, there was a gap in the timeline in the fossils: a large collection of megafauna bones of at least 50,000 years of age and probably much older, stepping up immediately to a very few recent rabbit and cat skeletons found only at or near the current entrance.

When carrying out the survey I concentrated on accuracy, in particular the positioning of walls, the numerous talus blocks (from the roof) and the location of each of the fossil sites. The massive, jumbled talus in this cave would have caused a trapped animal to fall ever lower between the gaps, where we found many of the skeletons wedged.



John Long holding Thylacoleo skull (after 'Mowital' treatment).
Photo: Clay Bryce, July 2002

The Museum team, assisted by Paul, Eve, June and George went to work painting a case-hardening plastic called "Mowital" onto the extremely fragile bones. Mowital is polyvinyl butyral dissolved in ethanol (pure alcohol), which can be painted onto the bones where it sets hard. It is a reversible process, so the Mowital can be later removed by washing in ethanol to get back to the original bones if necessary. The process of painting on the Mowital is slow and requires a careful hand, especially during the first coat when the bones are still extremely fragile. It is a heady process too — the ethanol fumes can build up in the cave quite nicely.



John Long (left) and Gavin Prideaux preparing Thylacoleo skeleton with 'Mowital' prior to its removal from Flightstar Cave (N-2098).
Photo: Peter Ackroyd, 10 July 2002



Ray Gibbons (left) and Peter Ackroyd surveying in Last Tree Cave (N-2121).
Photo: June MacLucas, 14 July 2002

As Ray and I surveyed above the bone painters, we could hear Nick Mayman's rendition of "Dem bones, dem bones, dem ... dry bones" arise musically from the deep. It was not to be the last time we heard that particular song.

The following day was a visit to the prize cave, Flightstar (N-2098). John and Gavin zipped themselves into Tyvec (thin plastic) over-suits and donned face masks in order to collect potential DNA or chemical signatures of biological material left below the only complete *Thylacoleo carnifex* skeleton known to exist in the world. John was particularly pleased that we had not disturbed the skeleton as this made it feasible to carry out such biological tests and also to conduct dating techniques like ESR (Electron Spin Resonance) and OSL (Optically Stimulated Luminescence) on the undisturbed quartz sediments below the skeleton.

The whole of 10 July 2002 was also spent at Flightstar Cave where photography and bone recovery were the main tasks. In the evening we were introduced to two staffers from *The West Australian* newspaper — science writer Carmelo Amalfi and photographer John Mokrzycki. The Western Australian Museum was keen on some publicity (without revealing the locations of the sites) in order to help with funding applications, a plight common to all museums I fear. Paul, Eve, Ken and Ray were interviewed about the discovery of the fossils, and the palaeontologists about their significance.

The days continued in like manner with only minor incidents, like the need to chip ice out of the billies on a sub-zero Nullarbor winter morning; or the day the wind came up suddenly and tried to blow the Western Australian Museum's huge marquee tents into the Great Australian Bight, with a group of three or four of us barely able to prevent it from doing so. Some tent repairs had to be carried out later that day.

The journalists left for Perth after having been with us for three days. I continued the surveying in Last Tree Cave (N-2121) with various helpers, but mainly with Ray. As we surveyed we found more passage and many more megafauna skeletons, including *Thylacoleo*. Some of the *Thylacoleo* skeletons in particular were in very good condition, though not as complete as the one in Flightstar.

On 13 July we cavers (Ken, June and George, Ray and I), had a rest day. We first belayed the palaeontologists down Flightstar Cave, and then drove west in two vehicles to look for a new area around which to base our next cave-searching trip. Ray and I had been a fair way to the west during our April trip so already had a good idea for a base location. On the way there we stumbled over a karst feature, as can happen, which I tagged 6N-2256.

When we reached the proposed campsite and Ken indicated he was happy with it as a suitable landing area for his ultralight plane, I logged it and we returned to camp. It was to become "L 4-5 Camp", a base for our next two flying trips in 2003 and 2004.

Upon our return to the camp in the evening we found that John had organised a slap-up meal for which we had to dress "formally". Out came the bow ties combined with varied "formal attire" for an enjoyable, boisterous night.

The days passed with more surveying, including plotting the exact location of each of the fossil finds. Fossils continued to be found, painted with Mowital and Nick Mayman kept up his singing, with slight variations, "dem bones, dem bones, dem ... old bones".



Undisturbed skull of *Thylacoleo carnifex* in Flightstar Cave (N-2098) — note dentition. Photo: Peter Ackroyd, 10 July 2002



Undisturbed bones of front paw of *Thylacoleo carnifex* in Flightstar Cave (N-2098) — note large 'thumb' claw in lower centre of photo. Photo: Peter Ackroyd, 10 July 2002

Matt Cupper, a postgraduate student working on Optically Stimulated Luminescence (OSL) dating techniques for sediments below the various fossil sites, arrived in camp from Melbourne on 15 Jul 2002. He became very busy collecting sediment samples from the three caves.

The third cave, Leaena's Breath (N-2200), originally discovered by Paul Devine and Eve Taylor in April 2002, was examined and surveyed. Apparently, like Flightstar Cave, it was a classic animal trap, having a vertical shaft dropping into a chamber, but had a narrower entrance. Paul and Eve assisted the palaeontologists into the cave and helped find several more megafauna fossils. Ken carried out the survey, assisted by Nick Mayman.

Ray and I commenced the survey of Flightstar Cave and, as with Last Tree Cave, we found (and plotted) new fossil sites. The roof was quite high in Flightstar Cave, so I used a laser pointer and a range-finder to get roof dimensions. This method was also useful for surveying into confined fossil sites where traffic had to be kept to a minimum (see maps of these two caves in appendix I).



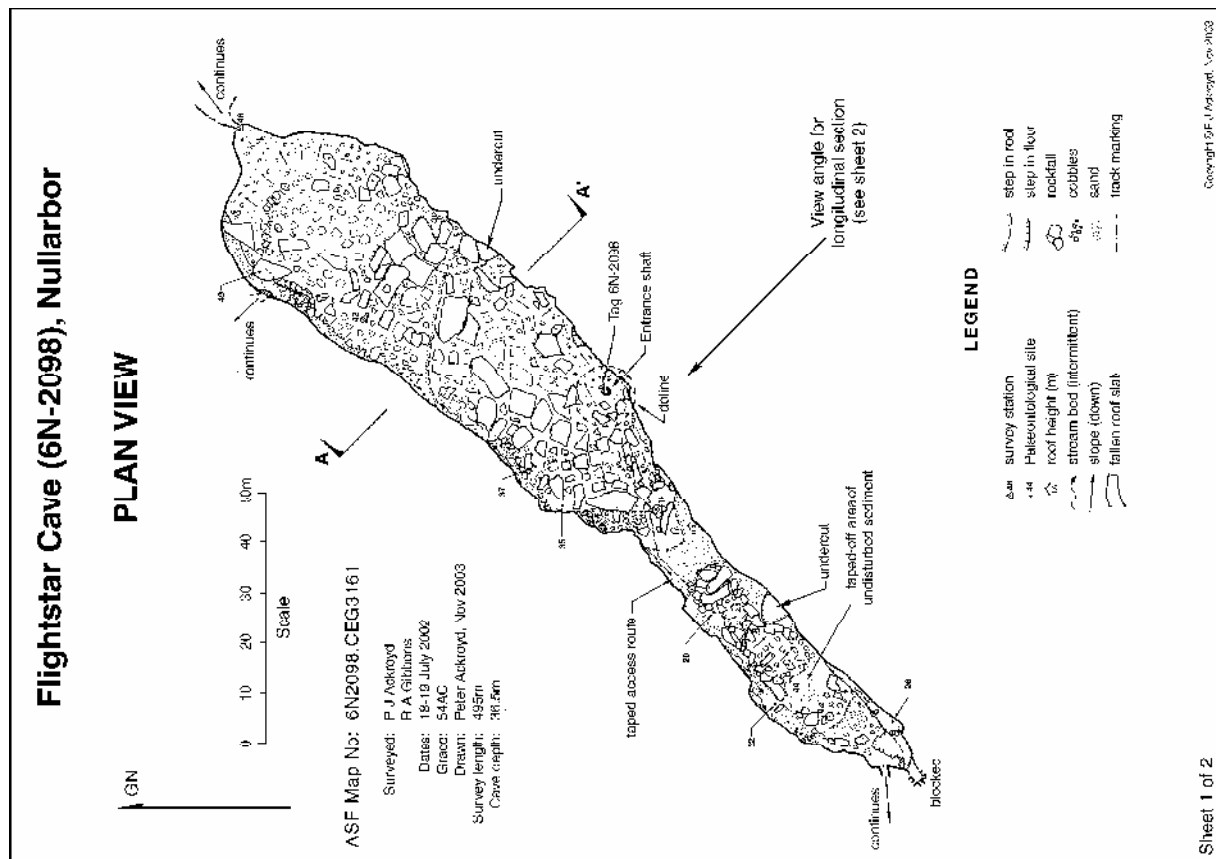
Mummified western quoll (*Dasyurus geoffroyi*) in Flightstar Cave (N-2098).
Photo: Peter Ackroyd, 10 July 2002

Saturday 20 July 2002 was the last night in camp for most of us. Paul had broken a rear spring on his Toyota Hilux and, using the WA Museum's nifty satellite phone, he had ordered a replacement to be delivered to Mundrabilla Roadhouse on the Eyre Highway. We cruised down south to see the spring arrive safely and be loaded onto the museum's vehicle to be ferried back to Paul in the middle of the Nullarbor.

The bones were carefully packed into crates and boxes in the rear of the second museum vehicle, John Long casually mentioning that on the fossil black market the contents of those boxes and crates would reach anything between \$100,000 and \$1,000,000.

June and George with Ray and Gavin in the MacLucas vehicle and Ken and I in the Rodeo ute headed for home in the east, driving via the Bunda Cliffs, Ceduna and finally arriving in Adelaide very late on the night of 21 July 2002.

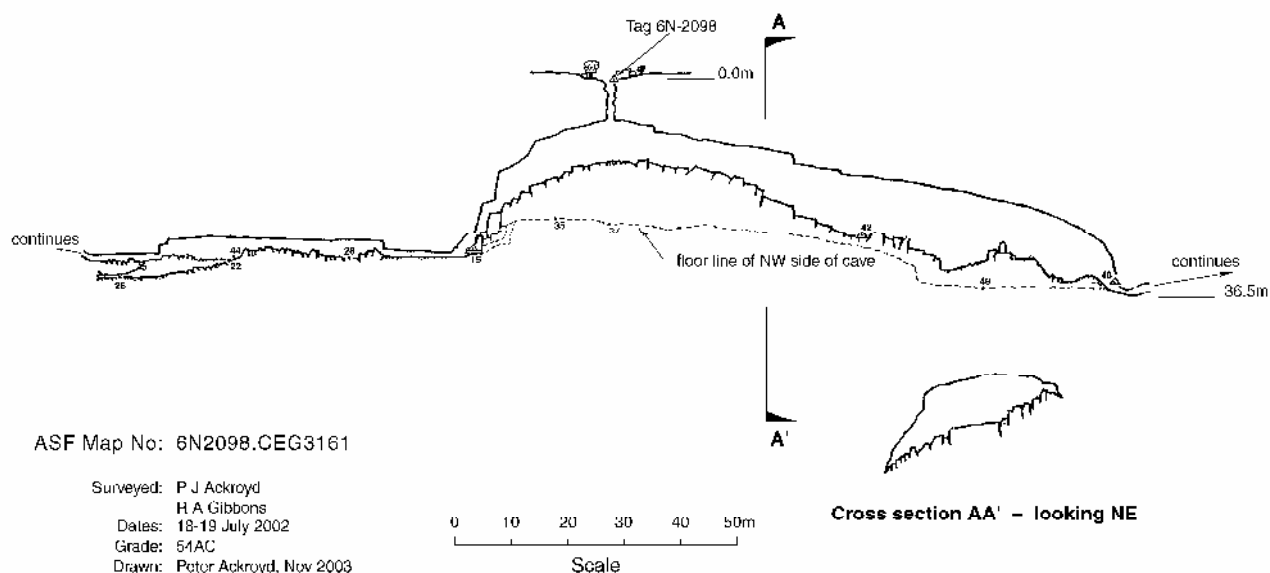
Appendix 1: Maps



Plan View of Flightstar Cave (6N-2098).
Drawn by: Peter Ackroyd, November 2003

Flightstar Cave (6N-2098), Nullarbor

Longitudinal Section – looking northwest



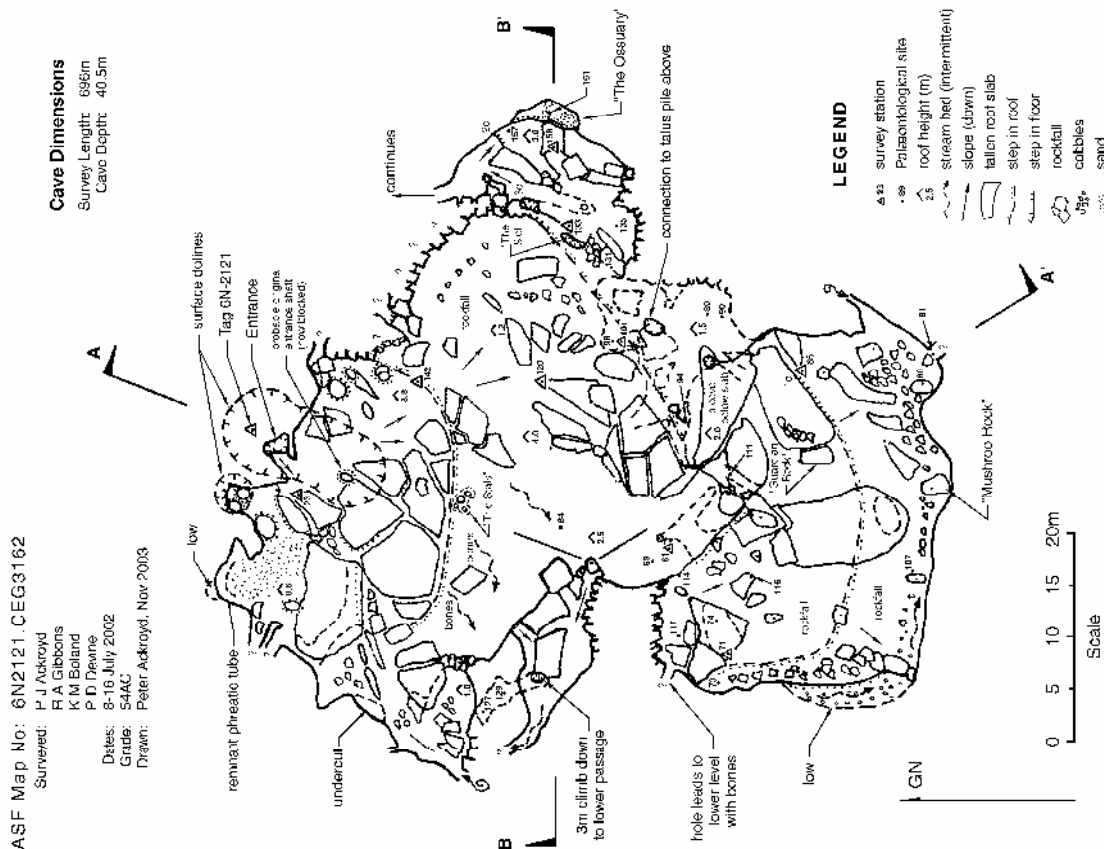
Sheet 2 of 2

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Longitudinal Section of Flightstar Cave (6N-2098).
Drawn by: Peter Ackroyd, November 2003

Last Tree Cave (6N-2121), Nullarbor

PLAN VIEW

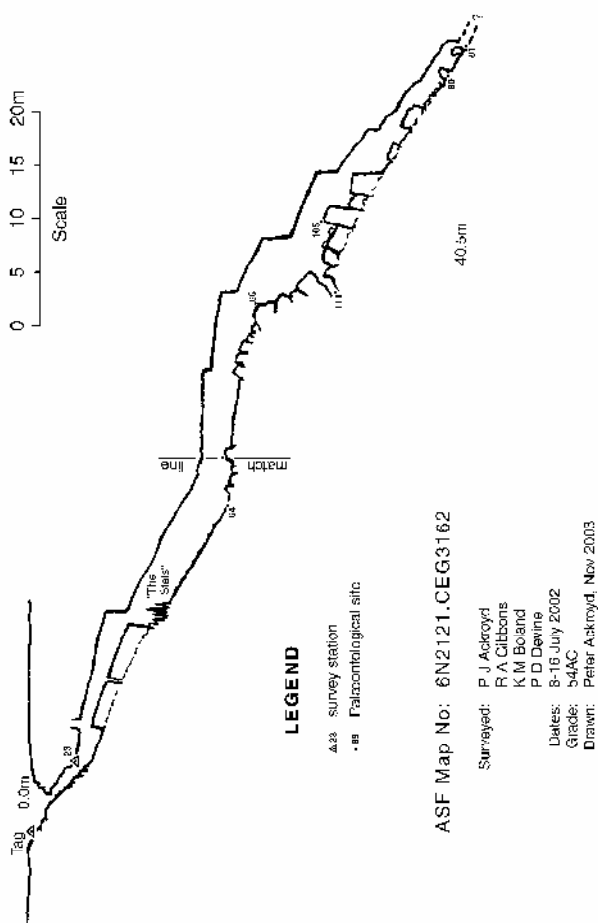


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Sheet 1 of 3

Plan View of Last Tree Cave (6N-2121).
Drawn by: Peter Ackroyd, November 2003

Last Tree Cave (6N-2121), Nullarbor



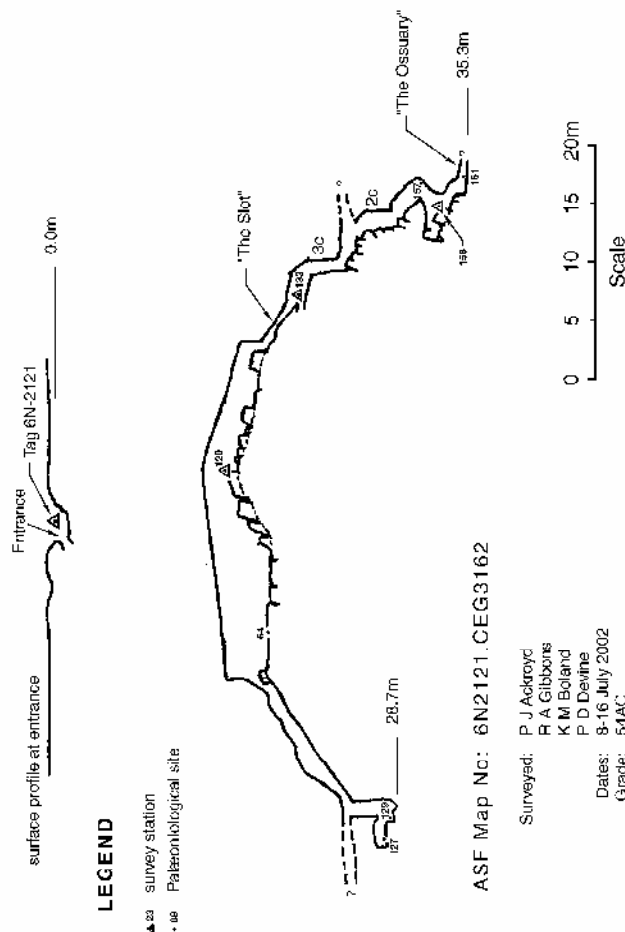
ASF Map No: 6N2121.CEG3162

Surveyed: P J Ackroyd
R A Cribbons
K M Boland
P D Devine
Dates: 8-16 July 2002
Grade: b4AC
Drawn: Peter Ackroyd

Sheet 2 of 3

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Last Tree Cave (6N-2121), Nullarbor
Cross Section BB' – looking north



ASF Map No: 6N2121.CEG3162

Surveyed: P J Ackroyd
R A Gibbons
K M Boland
P D Devine
Dates: 8-16 July 2002
Grade: 5/AC
Drawn: Peter Ackroyd, Nov 2003

Sheet 3 of 3

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Profile View of Last Tree Cave (6N-2121).
Drawn by: Peter Ackroyd, November 2003

Appendix 2: List of people on the two trips (all CEGSA members except where indicated)

Initial trip with ultralight plane (9 April – 2 May 2002):
Peter Ackroyd, Ken Boland (VSA), Chris and Ray Gibbons

Follow-up party meeting us at Last Tree Camp:
Daryl Carr & Marg James (VSA), Paul Devine & Eve Taylor, Tom Porritt (VSA), Jake Turin (NSS), Nick White (VSA).

Bone recovery trip (3 July – 21 July 2002):

Cavers:

Peter Ackroyd, Ken Boland (VSA), Paul Devine & Eve Taylor, Ray Gibbons, June & George MacLucas.

WA Museum party:

Clay Bryce, Matt Cupper, Lindsay Hatcher, John Long, Nick Mayman, Mark Norton, Gavin Prideaux, Dan Searle.

Appendix 3: List of new karst features documented

April 2002 trip:

New 'N' numbers allocated, tagged and documented: 6N-2003 to 2009, 2095 to 2109, 2111 to 2137, 2200 to 2235, and 2239 to 2250 (Total = 97).

Existing 'N' numbers visited and data collected: 6N-82, 343, 690, 716, 717, 1243 (Total = 6).

Temporary numbers allocated by Ken: 6NXX-724 to NXX-954 (Total = 231).

Temporary NXX numbers located and allocated an 'N' number = 79.

Temporary NX numbers located and allocated an 'N' number = 1.

July 2002 trip:

New 'N' numbers allocated, tagged and documented: 6N-2256 (Total = 1).

Appendix 4: Preliminary palaeontological results

Analysis of the palaeontological material is continuing, but it is known that around 60 distinct species have been collected from just these three caves, of which at least 10 are new to science. The new species include a remarkable 'horned' wallaby and two species of tree kangaroo. Clearly the Nullarbor had more trees on it not so long ago.

Dating of the material is also ongoing and the OSL results show the material is older than 500,000 years. One site (Leaena's Breath Cave, N-2200) shows a magnetic reversal in the layered sediments at only 0.5m depth. (The north and south magnetic poles have 'switched ends' several times over the life of the Earth and these reversals have been calibrated against known dates.) This discovery has pushed back the age of the bones, in Leaena's Breath Cave at least, to more than 780,000 years.

The richest site has proved to be the "Ossuary" in Last Tree Cave (N-2121) yielding many new species. Unfortunately, due to the mixing at this site, many of the bones are fragmented.

The most attention-grabbing site is without doubt Flightstar Cave (N-2098). It is difficult to convey the sheer awe one experiences when looking at a half-million year old, but still perfect, skeleton of the World's largest carnivorous marsupial.

Partial list of species (of about 60 species in total) found:

Flightstar Cave (N-2098)

Thylacoleo carnifex (marsupial lion — complete skeleton)

Congruus kitcheneri (large browsing wallaby)

Congruus new species 1 (large browsing wallaby)

Canis lupus dingo (dingo)
 Dasyurus geoffroii (western quoll)
 Sarcophilus harrisii (Tasmanian devil)
 Trichosurus vulpecula (brush-tail possum)
 Tyto alba (barn owl)

Last Tree Cave (N-2121)

Phascolonus gigas (giant wombat)
 Baringa new species 1 ('horned' wallaby)
 Baringa new species 2 (medium-size wallaby)
 Baringa new species 3 (small wallaby)
 Thylacoleo carnifex (marsupial lion)
 Metasthenurus newtonae (tall browsing kangaroo)
 Sthenurus andersoni (long-faced browsing kangaroo)
 Sthenurus tindalei (long-faced browsing kangaroo)
 Protemnodon sp. (giant browsing kangaroo)
 Procoptodon goliath (giant browsing kangaroo)
 Macropus ferragus (giant grey kangaroo)
 Bettongia pusilla (extinct Nullarbor bettong)
 Bohra new species 1 (tree kangaroo)

Leaena's Breath Cave (N-2200)

Phascolonus gigas (giant wombat)
 Baringa new species 1 ('horned' wallaby)
 Thylacoleo carnifex (marsupial lion)
 Thylacinus cyanocephalus (Tasmanian tiger)
 Sarcophilus harrisii (Tasmanian devil)
 Congruus new species 1 (large browsing wallaby)
 Congruus new species 2 (large browsing wallaby)
 Sthenurus andersoni (long-faced browsing kangaroo)
 Protemnodon sp. (giant browsing kangaroo)
 Lasiorhinus latifrons (hairy-nosed wombat)
 Macropus rufus (red kangaroo)
 Macropus ferragus (giant grey kangaroo)
 Bohra new species 2 (tree kangaroo)

Notes on palaeontological list:

'Giant' in this context means substantially larger than modern species, e.g. kangaroos 3m high.
 'Browsing' means leaf-eating rather than grass-eating (grazing).
 'Horned' refers to the pronounced bony protuberances above the eye (probably to protect the eyes from twiggy or sharp vegetation). Wombats have similar bony protuberances.
 'Tree kangaroo' refers to the ability to climb and feed in trees.

Acknowledgements

I wish to express my gratitude to Ray and Chris Gibbons, June MacLucas and Dr Gavin Prideaux for their helpful comments and corrections to earlier drafts of this article.

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- Ackroyd, Peter (2005), Nullarbor Flights of Fancy, *CEGSA News* **200** (Vol 50 No 4, Nov 2005): 88–91.
- MacLucas, June (2002) Historic Find: Fossil Treasures Unearthed on Nullarbor, *CEGSA News* **187** (Vol 47 No 3, Aug 2002): 68–69.

Peter Ackroyd, 18 October 2006

Northern Nullarbor April - May 2006

From the 21st of April to the 13th of May 2006, Eve, Wesley and myself undertook a more leisurely trip through from the Cape Arid National Park to Balladonia on to Mundrabilla then north to the rail and west back to Balgair.

Features visited: - 35 features logged as N Numbers including 2 NX conversions and a further 17 conversions from the NXP list (inc 4 Air-photo Points). 1 NX not converted, and 2 NXP not converted. 1 NX possibly converted - still needing clarification.

N-357, N-1369, N-1371, N-1372, N-1623, N-1628, N-2567, N-2970 to N-2999, N-3601 to N-3604
 NX-75=N-2997, NX-139?=N-2993, NX-187, NX-334=N-2994, NXP-36=N-2999, NXP-586=N-2997, NXP-589=N-2998, NXP-590=N-3603, NXP-624=N-2996, NXP-640=N-3604, NXP-642, NXP-650, NXP-661=N-2979, NXP-1587=N-2977, NXP-1591=N-2978, NXP-1613=N-2970, NXP-1614=N-2971, NXP-1615=N-2974, NXP-1616=N-2973.

On the 22nd of April we travelled east from Esperance. Then turning NE onto the Balladonia road we traversed the sandy and also roughest sections on this southern end. Nearing Mt Ragged we turned SE toward Israelite Bay stopping near Sheoaks Hill

On the 23rd we walked around 1km north of the track, from a point app 1.7km NW of Sheoaks Hill. In the process we located and logged 7 features, all of which I had previously noted on air photos.

They turned out to be large 2 to 4m deep degraded dolines, some of which had internal reactivated sinks or collapse areas. Even though this area had been burnt only a couple of years back these features were heavily vegetated making photography at ground level not a great deal of use in highlighting their size or shape.

N-2567 (=Air photo point A9/5133-05) is a degraded doline 50x40x2.5m deep with steep sides in the west and a flat floor. N-2970 (=NXP-1613) is a 90x40x4m deep @70deg large dumbbell shaped degraded doline with a reactivated sink in the SW corner. N-2971 (=NXP-1614) is a 60x30x2.5m deep @10deg degraded doline with a reactivated collapse hole 1.7x1.3x2.5m deep, in the base of the



N-2973 vague rim of doline in regrowth.

to gain N-2973 (=NXP-1616) is a degraded doline 40x30x3.8m deep with steep sides and a flat floor. N-2974 (=NXP-1615) is a 30x15x3.8m deep @90deg degraded doline with steep sides and a fresher collapse area in the west end. N-2975 (=A9/5133-07) is a 50x30x3.5m deep degraded doline with a flat floor.



N2977 Collapse area, with Google Earth view and Entrance inserts.

doline at the north end. This collapse hole extends a further 1.3m laterally. N-2972 (=A9/5133-04) is a degraded doline 55x25x1.7 @55deg.

To the west on the return trip to Mt Ragged a further 3 features were logged later that afternoon.

N-2976 (=A8/5227-32) is a degraded doline 50x40x3m deep @100deg. N-2977 (=NXP-1587) is a complex of app 4 dolines over 100x90m. The largest 100x20x2m deep @100deg having a collapse area 15x20x4m deep at the east end

containing a small entrance which extends at least 3m toward the north. This small entrance would require digging for entry. N-2978 (=NXP-1591) is a 110x40x2deep large highly degraded flat-floored doline with steeper sides in the west.

On the 24th we visited NX-187, this is a non-karst typical granite rockhole formed in an outcropping inlier on the west side of the Balladonia Road.

From the 25th to the 27th we visited Mundrabilla Station and caught up with Norm Poulter and Michael Bradley. They had been surveying Prostrate Pit N-1369, & informed us that there is now over 5km of surveyed passage. Norm and Michael departed later on the 25th just before it teamed with rain.

During breaks in the rain on the 26th I visited dolines N-1371 and N-1372.

By the 28th the pools of water had gone and the ground was drying out again. So after catching up with Collin and Brie, we departed Mundrabilla travelling north toward Forrest, stopping at Old Homestead overnight, and arriving at Forrest mid morning the next day. We then called in to see the Forrest Airport caretakers Paul and Suze before travelling north to an air photo feature. N-2979



N-2979 Doline complex.

(=NXP-661) comprises of an area app 80x50m immediately adjacent to and on the SW side of a donga like area which itself is approximately 100m in diameter. N-2979 is a complex of related dolines, sinks, shallow holes, slots and a small cave. We camped at the Forrest Met Station over the next two nights. The convenience of amenities, water, and kitchen made the token fee more than worthwhile. It also meant we were only a short walk to swap some good yarns with Paul and Suze around their campfire.

On the 30th of May we made a trip NW of Forrest branching off on a track that runs parallel to and south of the seismic station track. The only feature we located was a RH logged as N-2980.

On the 1st of May I travelled north again trying to relocate a feature N-357 which was first recorded in 1988 by Max Meth and party on a cross country excursion.



N-357 Doline@140°.

Back in Perth I had spotted a likely doline on Lowry's 1960 air photos, I subsequently calculated a location for it and added it to the GPS. Instead of using the GPS this morning I spent a futile hour or two scanning the country either side of a nearby NNE heading track. Good luck proving ineffective, I did the obvious logical thing, and checked out the area at the location I had previously worked out. The doline at the location had steeper sides to the SSE and was found to match the description of N-357 perfectly. The

previous estimated location derived in 1988 was only 1km in error. Which had been on the opposite southern side of a rise, where I had looked previously in October 2005.

Later after departing Forrest we travelled along the Anketell Road logging BH N-2981 in the afternoon. Further west we either missed the sidetrack from Anketell Rd north to the Mundrabilla railway siding or it is no longer recognizable as we spent an hour on dusk idling along trying to trace faint wheel tracks and praying to not slash a tyre on the cracking razor-rocks. In fast fading light we passed a couple of dolines app 2.5km SSE of Mundrabilla siding radio mast. The next morning we visited N-1623 which is located on the west facing, NNE-SSW trending, fault scarp that is app 6km west of the Mundrabilla siding. Nearby on the fault scarp I located another 3 rockholes, N-2982, N-2983, and N-2984. From there we headed north to the Mundrabilla meteorite site.

From the 2nd to the 7th we had a casual time exploring the local area, visiting N-1628 on the 3rd and logging two more features further to the SW. These are, N-2985 a pavement with both a BH and RH, and N-2986 that is a pavement with small RH. A further two rockholes were later found on the Fault scarp, N-2987 and N-2988. On the 7th we logged N-2989 a BH and small RH. This feature lay a few hundred meters east of the Mundrabilla meteorite monument. On the 8th travelling south again we stopped to log a further 2 rockholes, N-2990 and N-2991, on the fault scarp. There is now 13 logged rockholes over just 18km of the fault scarp on the north side of the Rail. As I have only explored sections of the fault scarp, it indicates many more should exist.

Rejoining the rail we headed west to Loongana then south to No3 bore, and then again west toward Kybo.

6 km along this track we logged N-2992 at a point where the track crosses a pavement containing 3RH's, 2Holes and an adjacent Doline on the opposite southern side of the track.

A further 3.5km west we stopped at a cairn marking a BH on the Southern side of the track. This feature is probably NX-139 (Glenn cave). The BH N-2993 has an entrance that is located 10m south of the track. Whilst logging the BH I had the good fortune to remind myself to turn my light on before I stepped onto the dimly lit base, 3.5m below the surface. Unfortunately the first thing I resolved less than a foot from my wedged boots was a Gwardar (Western Brown). It was fairly docile in the draft blowing at a measured 15°C. After a little nearby tapping, the snake (which to its own credit was rapidly reducing in my mind from the proportions, apt to be tackled by the likes of a Steve Irwin type character, to a more lifelike friendly size of just a bit over ½ a meter long...) obligingly slipped under a few loose rocks. Never the less with this newfound confidence I decided against squeezing over it and continuing with a survey of the low 5m+ streamway passage that I could resolve beyond...

Without fully exploring this feature, I can only presume in saying that it is Glenn Cave. Although it certainly appears to be, and it also has the same location as the one recorded by Mark Norton as Glenn Cave during a visit in 1998.

Later that evening we relocated RH N-2994 (=NX-334), a further 12km to the west.

The RH is located on an extensive pavement area which is on the NW side of a shallow flat floored depression. This depression is typical of a number of similar scattered, pavement rimed, shallow (0.5m to 1.5m deep), often irregular or semi-circular, bare flat soil/mud floored depressions up to 2-3 hundred meters in dimensions. These features often have associated rockholes but in general do not fit well with typical dongas. Instead are indicative of having a solid pavement base, overlaid by a varying depth of relatively shallow soil cover.

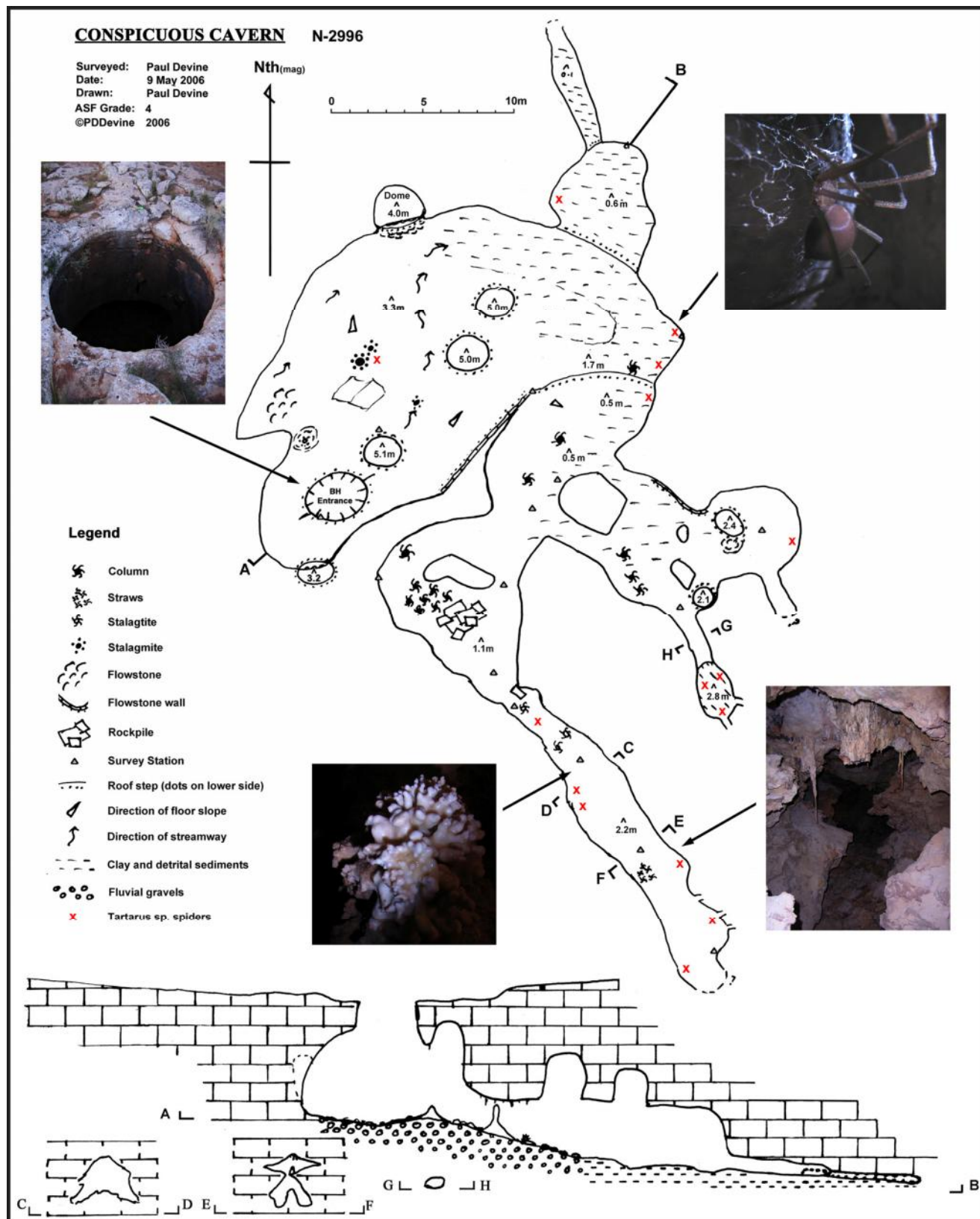
On the 9th of May continuing west stopping at rockholes N-2995 and N-3601 we later called through Kybo Station, and after briefly catching up with Rod Campbell we headed Northwest to Nurina siding then onto the track toward Haig Cave, travelling a little further Northwest before deviating North to a good looking Air photo feature. Earlier in mid 2003 I had resolved a doline on air photos that was app 6.7km NNW of Nurina siding. The feature is now N-2996 (=NXP-624), and was certainly easy to locate. It is also certainly the same feature as described by Colin Campbell in 2005 as being "a big hole in the side of a rise, to the Nth of Nurina Siding". He had observed this feature previously during aerial baiting. This BH has a pavement doline app 50x35mx1.4m deep and a large central blowhole 3.0m x 2.38m and 6.5m deep. The BH leads to a roomy cavern and a total of 110m of passage. The cave had been subject to extensive flooding which had occurred only a few months prior at the start of January. This is when Kybo recorded 150mm in only a couple of days. (See <http://www.abc.net.au/goldfields/stories/s1542173.htm>) As a result much detritus and flood-wash



Wesley peering into blowhole N-1628.



N-2993 Blowhole entrance.



material was present through all but the very back section of the cave. This included material wedged into pockets in the roof.

Fragments of at least 2 ropes were present, indicating earlier visits by cave explorers. Also a flat-sided linier coralloid stalagmite appeared to have been broken and gently shifted sideways to allow further progress along the main SE passage. This coralloid was now active and had app 1cm of regrowth on its broken base. Sections of degraded dark calcite are present throughout the cave, along with more recent straws and splash coralloids. Many of the more recent formations were active. A number of sheet web spinning *Tartarus* spiders (app 13 in total) were noted scattered throughout the cave, generally living within $\frac{1}{2}$ a meter of the floor. A small area containing many remnant bones of smaller marsupials was located near the start of the SE passage. Animals

identified include *Dasyercus* sp. (Mulgara), *Leporillus* sp. (Sticknest Rat), *Isoodon obesulus* (Southern Brown Bandicoot), *Antechinus* sp., *Notomys* sp. (Hopping Mouse), and *Trichosurus vulpecular* (Brushtailed Possum).

The next day we ventured further NNE from Haig Cave (N-55) along a doggers track which diverts from the main Nurina to Sleeper camp track at around 4.3km north of N-55. The northern end of this track apparently connects with the one heading to the east from Sleeper camp. At around 5½km north from the start of this track it crosses another feature that I had noted off air photos (NXP-586), an apparent large basin of pavement 280x130m @ 90deg set in the top of a rise with multiple radiating tracks to a RH. This feature now N-2997 was confirmed to also be NX-75, as not only does it fit the description, but "A.J.Carlsle 11-9-38 1938" is clearly chiselled into the pavement beside the deepest RH. This particular RH (RH1) has the dimensions 0.6x0.55 by a (without full excavation) measurable 1.2m deep. It is filled with rocks over a section of roofing iron. Possibly done in an attempt to prevent cattle from breaking their legs in the deep hole. The water found at a depth of 60cm was contaminated with oil. This RH is mentioned in KIDSA as being apparently 2.1m deep, recorded by Harry Wheeler on his visit in February 1956.

The rest of the rockholes in this pavement basin were mostly fouled by cattle, and water where present was largely putrid. No doubt differing substantially from their condition, which presented John Carlisle in 1938.

There are 14 larger rockholes in the basin, 8 have dimensions >0.5m along with many other much smaller rockholes, also a larger slot 9x2m and a hole 3.1x1.5m, both of which have a depth of 0.5m to soil bases. The absence of any form of soil layer within the basin appears likely a result of drainage into these two holes. The pavement forming the basin slopes up to a rim app 2m high in the north and 1m in the south.

Travelling further north and then SE we located RH N-2998 (=NXP-589), RH N-3603 (=NXP-590) and N-3602, which is a 4.3x1.3x0.9m deep diggable, breathing slot in pavement. After logging these we headed back toward Nurina siding. On the 11th we passed NXP-642 only locating shallow soil depressions. Travelling on toward Haig siding we logged a 45x30x2.5m deep soil erosion doline N-3604 (=NXP-640), and also checked NXP-650 which like NXP-642 turned out to be just soil depression runnels this time in the base of the Haig river. There were numerous gypsum fragments present in the soil horizon at this location, giving the surface a white appearance. Further on we caught up with Tony from Balgair doing repairs to their northern fence line. We then travelled down to the homestead. On the 12th we made a trip to David's Paddock where we logged a previous air photo feature N-2999 (=NXP-36). This is a degraded Doline 80x30m and a maximum of 2.5m deep in the west end. It has a gentle, west sloping soil floor. The doline is rimmed with exposed limestone and also has a section of large boulders at the west end. No other features were located during the brief trip on this day.

The following morning on the 13th we headed back to Kalgoorlie and later on to Perth.

Paul Devine.



RH1-RH2-Slot1-RH12.

%%%%%%%%%

Naracoorte, Sept 9th/10th 2006

Participants: Jeanette Chapman, Gary Woodcock, Russell and Alex Woodcock, Mark Sefton, Alistair Sefton, Damon Reece, Daniel Riddell, plus Graham Pilkington, Grant Gartrell, Stan Flavel, Damian Grindley and half a dozen VSA members doing various other things that weekend.

This was a CEGSA club trip, with a variety of activities on over the weekend, only some of which are listed here. On the Saturday, Alistair, Daniel (Alistair's friend) and I, the Woodcock family plus Damon Reece went down S102 cave, equipped with Gary's new jackhammer and generator. We spent the best part of five hours attacking the drafting slot just off the blind passage leading in the opposite direction to the main way on from the bottom of the entrance pitch (see map in the CEGSA newsletter, 1998, Volume 43 Nr 2). The boys soon got bored with moving buckets of rubble, but had no trouble entertaining themselves by reducing various large blocks removed from the dig to smaller ones using the selection of hammers, cold chisels and crowbars I had brought along for this purpose. Damon found an upward dig nearby (but no draft) which he attended to with great enthusiasm. After lunch, the boys had had enough of working on the chain gang, so I took them on a tour of the rest of the cave for an hour or so. By the time we got back, Gary had made considerable progress. The way on, however, did not continue beyond the end of this blind passage, but down through rockpile and back underneath ourselves, ending somewhere underneath the floor below the entrance pitch. The breeze poured out of a slot from the floor at the lowest point we reached. A short survey of what we had dug out is high on the agenda for 'next time', as it might prove easier in the long run to dig straight down through the floor from above, rather than drag tools through the current route. Everyone managed the ladder climb back up without difficulty and we were back at Wirreanda in good time for the evening festivities.

The next day, Alistair, Daniel and Damon spent a couple of hours as film stars, accompanying two of the parks guides being filmed by a TV film crew who were making a documentary on the Naracoorte Caves for 'The Great Outdoors'. Daniel, Alistair and I then drove up the road to join Grant, Gary and Alex in the continued dig at 'Myth Busters II' Cave. We made another metre and a half progress, and the continuation looks extremely promising.

Other activities on the weekend included getting a whole set of accurate GPS fixes and entrance photographs for the CEGSA database, some surveying in Robertson Cave and a trip to investigate a high CO2 cave further south. But that's another story.

Mark Sefton.

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Wirreanda Wanderings (9-10 Sept 2006)

By Damian Grindley (Contributions by Damon Reece aged 11)

Mark Sefton kindly organized a very enjoyable CEGSA meet at Naracoorte over the weekend of 9/10 Sept 2006. With so many projects going on concurrently and the tendency for members to do their own thing. The following only describes the Grindley clans inane wanderings over said dates.

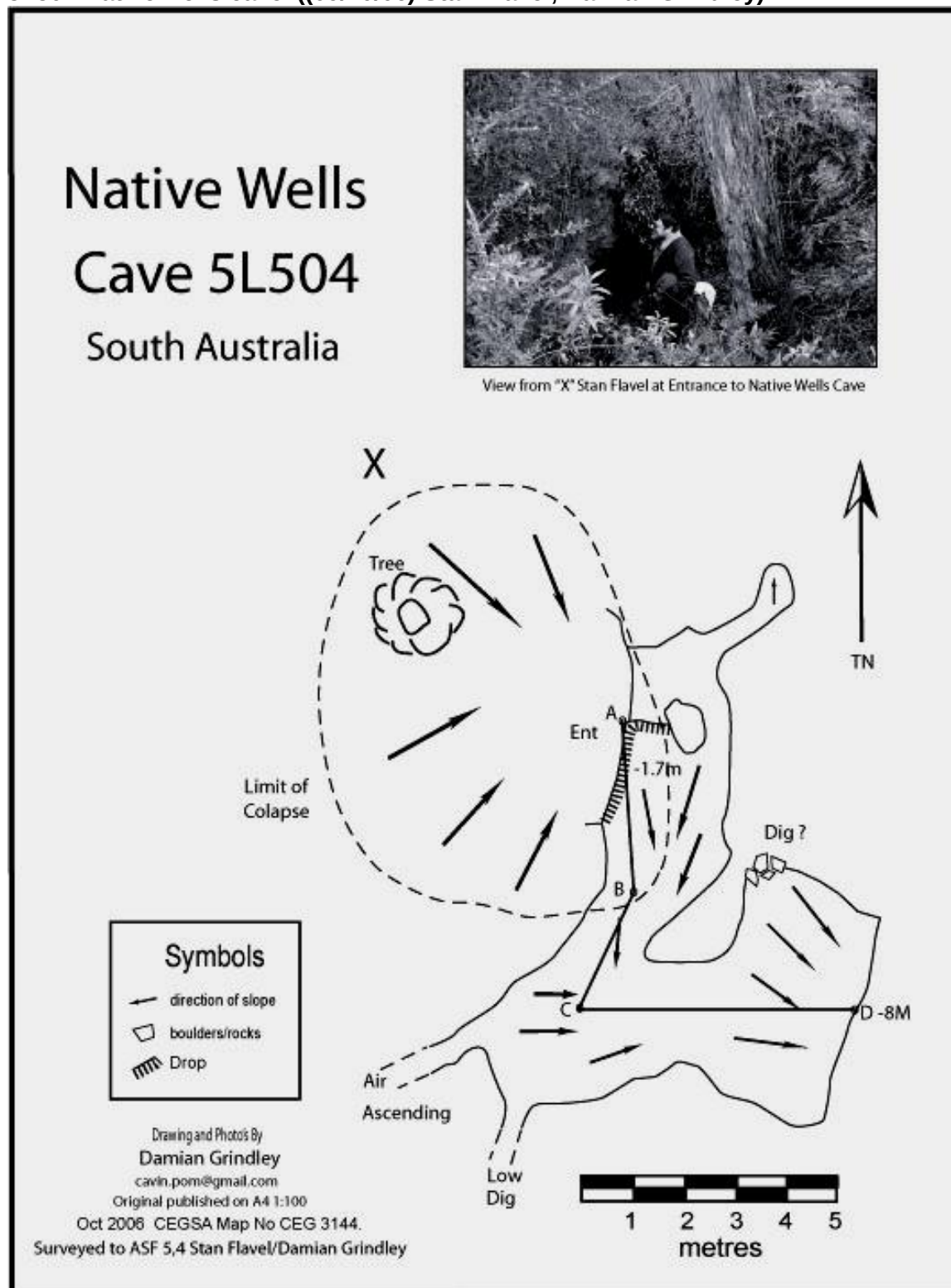
5L426 Varcoe CO2 Cave. ((09/10/06) Stan Flavel, Damian Grindley, Richard (Harry) Harris, John Dalla-Zuanna, Trevor Wynniat)

This cave was last reported in CEGSA news Vol 45. Number 3. Aug 2000. Dangerously high levels of Carbon Dioxide, with a corresponding decrease in oxygen, were recorded at the time. However a number of questions remained and it was hoped to clarify some of these. Did the CO2 observed vary with the time of year or for that matter from year to year. The subsequent gating of the cave may well have reduced airflow and prevent any meaningful comparison between current and previous levels, however creates questions of its own. Had the gate acted as a proverbial cork in a bottle? This could have let CO2 levels increase or decrease depending on its source. Of additional interest were the pools of water observed, these appeared to get deeper along a rift that had not been followed due to limitations of air supply equipment.

Being on diver time we were setting up at the cave by 9.30. Stan's monitoring system was soon rigged after a few issues picking the correct scale. All readings below the entrance pipe seemed in line with our previous visit. Richard and I kitted up with 9L air cylinders and progressed downwards. Briefly removing the mouthpiece to point out historical graffiti and the lack of water in pools the author quickly felt uncomfortable, slightly nauseous and decided to pull the trip. An increasingly rapid ascent/dash to the exit was made. Hyperventilation was experienced by the time the entrance pipe was reached. Both cavers felt shaky and weak for some time after exiting.

What we suspect is that after fitting of the gate the air within the cave has become stiller allowing the CO₂ to settle where previously some mixing had occurred. This explains the minor variations in readings we had before, and the pool of undoubtedly lethal CO₂ we clearly hit on this follow up trip. Under no circumstances should this cave be entered.

5L504 Native wells cave. ((09/10/06) Stan Flavel, Damian Grindley)



Marie Choi and the author had previously searched for this unrecorded cave in a triangular block of primary scrub in the Lower South East. This lead was from a verbal description and not surprisingly we failed to find it at the time.

The cave had been reported by contractors clearing out pine saplings from the native scrub. A little homework and a few e-mails and we had a Grid ref. However, on the day we took the opportunity to grab Trevor and got him to lead us straight to the cave. How this cave was unknown to CEGSA is a mystery as the land slopes down towards the cave for a considerable distance. In actual fact our Grid ref would have taken us to the neighboring block of scrub. The cave was actually in the original block Marie and I had tramped through, but at the pointy end we had not looked at.

Although Trevor advised us to bring a ladder, a simple scramble down over a step and through a throng of mozzies led to a low crawl leading to a couple of low chambers. In all about 15m was surveyed at an average slope of say 40 degrees. A few animal tracks in the silt but otherwise little of significance. Bit disappointing really, hole in the ground promised so much more. (BTY what is the term for a dense group of mozzies, suggest should be a swallow. Cough Cough)

Myth Buster II ((09/10/06) Stan Flavel, Damian Grindley, Grant Gartrell, Katherine Sellars)

Finished early so took the opportunity to haul buckets out of Grants aptly named dig on the next ridge inland from Naracoorte W.H.O. Grant looked pleased as Katherine and he had all but run out of stacking space. Thirty to forty buckets probably moved half a tonne of spoil leaving some space for a further assault.

The Great Outdoors, By Damon Reece (age 11)

Meeting Tom Williams from "The Great Outdoors" (TV Show)

This is an account of the Sunday morning when Tom Williams from "The Great Outdoors" TV show came to Wet Cave.

Wet Cave, Naracoorte Caves, Naracoorte, Sunday Morning about 8:00 am

We had a small group. The adults were Barbara (cave guide), Amanda Grindley, Tom Williams (from "The Great Outdoors"), and his crew (camera guy, sound guy, and producer).

The kids in the group were myself, Alistair Sefton and his friend David. Tom was a nice guy. Everybody got along great with him and so did I. The only thing was he was slightly indisposed to getting dirty. After that was resolved, we set off into Wet Cave Tomato Entrance.

We shot a small amount of footage inside the mouth, and along to the spot where the fence was. Some of the footage we took was of two idiots (I don't know them!) crawling through possum faeces, and also some of a bat, hibernating, but definitely not echo locating itself around.

The camera couldn't come through the tunnel so the camera crew rushed to the other end in the van while we tried to beat them to the end going through the passages. We shot more footage at the Stick Entrance and got some prize footage at the Eye of the Needle. I had a few lines to say, and I had to crawl through the Eye of the Needle. What I had to say was this: (legs disappear) "Come on Tom, come through!" (Then Tom starts speaking "this is called the eye of the needle blah blah blah").

We left the cave (a very long and lengthy process, what with the camera, and the sound equipment, and the small but very bright light). I asked when the TV presentation would be on and the producer said it would be on in a couple of months. After that the camera crew went off to the Wonambi Fossil Centre to shoot some more valuable footage. Everybody else slowly dispersed back to the campground.

Watch the Great Outdoors, 7:30 pm Mondays on Channel 7

Robertsons 5U17 (Damian Grindley, Nick White, Stan Flavel)

Finally for the weekend continued ongoing resurvey project in Robertson's. 22legs, 150mtrs, 3hrs.

Damian Grindley.

Past Trips from General Meetings

August General Meeting

1. Paul Harper – visited Corra Lynn cave .
2. Tim Payne – reported on a diving trip to Cocklebiddy cave. They surveyed approximately 1.6 km in the third sump.
3. Stan Flavell – club trip to Carrickalinga Cave. A17 was also found, and another cave was dug. It looks promising.
4. Marie Choi – she and Damian Grindley photographed entrances in the lower south east for Peter Horne. They got into a cave, the entrance of which had been filled up for some time but which had been reopened recently.
5. 'Harry' Harris – described the recent diving trip by himself, Ken Smith, and four others to Kija Blue in the Kimberlies. They spent four days exploring and surveying underwater and laid 1 km of line. The surface of the lake is approximately 100 m x 30 m and slopes down underwater for a horizontal distance of 3-400 m and to a depth of 110 m.

September General Meeting

Items 1 to 6: Naracoorte weekend 9-10 Sep 2006.

1. Marie Choi – Steve at Naracoorte mentioned the poor state that the BBQ was left in after the last CEGSA trip there.
2. Damian Grindley – trip to L426 to dive but very high CO₂, which has increased since the cave was gated, forced a quick exit. Native Well Cave (L504) near Tantanoola was located, surveyed and photographed.
3. Grant Gartrell – U230 dig extended 1.5m. Robertsons Cave dig.
4. Gary Woodcock – S102 dig back under blocked tube next to entrance. Robertsons Cave survey continued.
5. Graham Pilkington – GPS and photography of the caves on the Reserve and close by.
6. Several helpers to the "Great Outdoors" film being made that weekend.
7. Grant Gartrell – trip to A5.

October General Meeting

1. Stan Flavel/Grant Gartrell – described a trip to Kangaroo Island with Eddie Rubessa and family, Paul Harper, and Tom Wigley. Activities included a BBQ with National Parks staff, a tour down K11 and several other caves were investigated. Michael Kidd (Senior Guide) is about to move on. CEGSA is well recognised in Parks literature on the caves there.
2. Ken Smith – reported a trip to the Ninbing Ranges (Northern Territory) which is 'full of caves'. The party tagged 15 new caves and explored a number of these. One was a wet-season resurgence and consisted of a 100 m crawl, ending at an inlet which drained a basin. The caves are well decorated. One cave had several hundred metres of well decorated passage. Documenting this area is being coordinated by John Cugley.
3. Grant Gartrell – he, Lance Hoey, Barbara Wiesner and Frank Hankinson went to Myponga and investigated several small caves.
4. Harry Harris – visited Punyelroo Cave.
5. Peter Horne – described a diving trip to Narina Lake Cave , illustrated with digital photos taken by Harry Harris.

TECHNICAL and OTHER ARTICLES

MEMBERSHIP

Welcome back former member:-

Steve Milner **9004** 43 Pekina Street EDEN HILLS SA 5050
 (M) 0402-884-121 (H) 08-8278-3784 (W) 08-8354-7773
steve.milner@biologystics.com

MEMBERSHIP FEES

CEGSA MEMBERSHIP FEES FOR YEAR 2007

Full Membership	\$ 51.00
Associate Membership	42.00
Long Term Associate	51.00
3 Month Introductory	5.00
Joining Fee	12.00 (not applicable to 3 month intro)
Discount for email CEGSA NEWS	15.00
Discount for Country Membership	6.00

ASF LEVY FEE FOR YEAR 2007

Single	\$ 68.00
Family	121.50
3 Month Introductory	20.00
Student	61.00

YEAR 2007 FEES

	CEGSA	+ASF	TOTAL
Full Membership	\$ 51.00	\$ 68.00	\$119.00
Associate Membership	42.00	68.00	110.00
3 Month Introductory	5.00	20.00	25.00

Variation for Family Membership

1 st Full Member + 2 nd Full Member			
Less \$16.00 for only 1 CEGSA News	\$86.00	\$121.50	\$207.50

1 st Full Member + 2 nd Associate Member			
Less \$16.00 for only 1 CEGSA News	\$77.00	\$121.50	\$198.50

1 st Associate Member + 2 nd Assoc Member			
Less \$16.00 for only 1 CEGSA News	\$68.00	\$121.50	\$189.50

Discount for Country Membership applies to Family Memberships.

Please make sure your payment of fees includes CEGSA and ASF, if applicable.

Chris Gibbons

Treasurer/Membership Officer

Approved CEGSA Trip Leaders

Name	Caving Leader level
Marie Choi	Horizontal, Laddering and Vertical
Paul Deer	Horizontal, Laddering and Vertical
Stan Flavel	Horizontal and Laddering
Grant Gartrell	Nil
Chris Gibbons	Nil
Damian Grindley	Horizontal, Laddering and Vertical
Paul Harper	Horizontal, Laddering and Vertical
Richard Harris	Horizontal
Lance Hoey	Horizontal and Laddering
Peter Horne	Horizontal and Laddering
George MacLucas	Horizontal, Laddering and Vertical
June MacLucas	Horizontal
Tim Payne	Horizontal, Laddering and Vertical
Graham Pilkington	Horizontal and Laddering
Eddie Rubessa	Horizontal and Laddering
Mark Sefton	Horizontal and Laddering
Tom Szabo	Horizontal
Gary Woodcock	Horizontal and Laddering

All the above named are also CEGSA Trip Coordinators

Members may query the classification of any Trip Leader at any time with the committee.

It is a requirement that each trip be organised by an approved Trip Coordinator to be classed as an official CEGSA trip.

It is also a requirement that dependent party trips be led by an approved Trip Leader at the appropriate skill level for the cave being entered.

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Naracoorte Accommodation

Please note that the charges for overnight accommodation on the Naracoorte Caves National Park for CEGSA members, on CEGSA or other trips, are as follows:

At Wirreanda (room plus use of the kitchen facilities) - \$14.50 /night per person, or \$49/night for a family room (mum dad and up to 6 kids).

At the camping ground - \$19/night per site or \$5.50/night per person for group camping.

Discounts for work undertaken on the Reserve should not be expected unless prior arrangements have been made with the Park Management.

Accommodation at Wirreanda needs to be prebooked on 8762 2340.

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CEGSA's Contribution to Tourism and the Environment of South Australia

The Cave Exploration Group of South Australia (CEGSA) was founded in Adelaide in 1955, fostered by the South Australian Museum and the University of Adelaide who saw the need for the State to have an organization of specialists to investigate, explore, record, manage and preserve the caves of South Australia. At that time only approximately 50 caves were known across the State - - today almost 5000 are mapped or recorded and more are being discovered as our knowledge of South Australia's considerable limestone resources increases. The original motivation for this was for cave

explorers to enhance the State's fossil collection as caves were recognised as primary locations for preserved remains. Little did anyone guess how spectacularly this aim would later be achieved?

The early exploration of South Australia's land surface in the 19th century was followed closely by development and exploitation without awareness or thought of environmental impacts or concepts such as tourism. By their underground nature, caves were generally not noticed in the early settlement years so their serious exploration phase only began with the formation of CEGSA more than 100 years after the first settlers arrived at Holdfast Bay.

This meant that speleologists (cave explorers) were in a position to examine SA caves carefully and responsibly as each was discovered, and from the outset to liaise with the relevant public and private landowners to maximise protection and enjoyment of these features from the beginning. This landowner liaison has been the mainstay of CEGSA's activities throughout the last 50 years and has operated to the great benefit of all parties.

The result is that CEGSA's activities have contributed in a special and significant way to environmental and tourism resources in the State. These advances can be summarised across the State and across the decades, with each decade reflecting the changing community and environmental expectations of South Australians.

1950's -- Exploration and Initial Assessment

CEGSA became active immediately upon formation in assessing the distribution and location of limestone areas across the State from the South East to the Nullarbor Plain, along the Murray River, on both peninsulas and along the length of the Lofty/Flinders mountain chain. Quickly realising the extent and variety of SA caves, CEGSA initiated a national Karst (Caves) Conference in conjunction with the Adelaide ANZAAS Conference and designated two areas of immediate importance to be assessed involving national experts.

This resulted in the development of awareness about the Kelly Hill Caves complex on Kangaroo Island and significant enhancement of public interpretation there for tourism purposes. Attention was also directed nationally to the Nullarbor Plains, where breathtaking historical, geological and anthropological discoveries were made, particularly in Koonalda Cave – one of the world's most important pre-history occupation and early rock art sites. Many publications and several books have been produced on this outstanding South Australian cave of international status. It is protected by the SA Museum.

1960's -- Tourism and Natural Science

Having established a national reputation for the science and attraction of SA caves, CEGSA directed its efforts and expertise to the South East – an area long known to the public for caves of fascination and beauty. Primary focus was given to the exploration and documentation of the caves at Naracoorte. Here the SA Tourism Bureau benefited greatly from new information about the tourist caves. This enhanced public presentations by guiding staff and allowed visitors to value and appreciate the uniqueness and fragility of caves more so than in earlier years. One of CEGSA's most important members was Ern Maddock, Manager of Regional Tourism at the time, who saw the significance of CEGSA's knowledge and the public's increased enthusiasm for understanding caves.

At the same time, small but significant fossil discoveries were being made in local Naracoorte Caves and quarries, building up a picture of the diversity of prehistoric creatures of the region. These were fascinating but tantalising as they only gave glimpses of the animals – teeth, a leg bone or vertebrae etc. Realisation developed that this was indeed a rich region for ancient fauna and deserved extra attention. And for the modern cave dwellers, systematic bat banding programmes were run across the region's caves to understand their hibernating and breeding patterns and monitor their populations and health for possible protection.

1970's -- Wonderful Discoveries at Naracoorte – Fossils and Hidden Chambers

A major breakthrough in Victoria (tourist) Cave occurred when CEGSA members discovered two hidden chambers containing an uncountable number of excellently-preserved fossils buried in deep

fine silt. The sheer quantity and quality eventually led to the designation of the Naracoorte Caves as a World Heritage Area, and CEGSA developed an extensive series of maps of the caves complex which scientists and Parks staff today. CEGSA assisted in planning and excavating new access ways so the public could view the fossil deposits and watch palaeontologists at work reconstructing the past. Many international conferences have been held in Naracoorte in the following decades focusing on this unique international asset.

In a separate discovery, CEGSA speleologists rediscovered the northern half of the prettiest tourist cave (Alexandra Cave) which had been buried and lost for 80 years. It was subsequently excavated and developed to completely change the visitor flow in that cave enabling tourists to see much more of the cave and experience a greatly-enhanced explanation of its fascinating history and beauty. Another cave discovery very close by found the longest straw in Australia (5m long in Blackberry Cave) which remains very well protected today. The culmination of caving activity at Naracoorte during this decade was the publication of a popular public book "Discover Naracoorte Caves" covering all the topics from early days at Naracoorte to modern science and environmental appreciation.

1980's -- Groundwater Pollution and the Spectacular Sinkholes

As environmental matters became of much greater significance to South Australian society, CEGSA focused on the caves and giant sinkholes of the Mount Gambier region for two reasons – the giant sinkholes (known as "cenotes") are almost unique on the planet (the only others are found in Mexico) and they lead directly to the region's groundwater supplies. However, from maps and records together with local recollections, a picture emerged of a long history of pollution and dumping within certain well-known large cave entrances across towns and farmland.

These issues became very important publicly after a number of media-published incidents of chemical dumping and a survey based on CEGSA records of sites containing large tonnages of rubbish – organic, metal, plastic and chemical matter. CEGSA organised a major cleanup operation at Earls Cave which removed 10 truckloads of rubbish just from raking off the surface of a small lake in the entrance – a lake which only 20 years before had been a beautiful clear blue local swimming hole.

The result of this cleanup and the other publicity was a change in SA legislation to prohibit dumping into cave entrances and quarries etc, due to the public realisation that all groundwater was linked across the region via cave and fracture networks in the limestone – so that pollution going in at one point was being drawn out at another for drinking water and stock usage. This has led to a regional water quality improvement, education of the public and in schools, world-class water management practises and a cutting-edge scientific understanding of limestone aquifers which can be applied to other regions utilising South Australian expertise.

A considerable amount of groundwater information came from cave divers in the sinkholes who were contributing to CEGSA scientific records. The development of this specialised sport began after CEGSA and other bodies were members of a South Australian Government Committee recognising the region's international diving attractions and significance, but directing cave divers to construct best-practice cave diving safety standards. The sport then blossomed and brings millions of dollars per year into the Mt Gambier region with the sinkholes featuring in National Geographic and at many international Scuba Conferences, the spectacular Piccanninie Ponds being the State's showpiece. A popular book "Cave Diving in Australia" was produced by two CEGSA members as a guide, training reference and a scientific summary for the sport and the sinkholes, followed by a comprehensive publication on the caves of the Lower South East.

1990's -- Caves of the Ranges and Saving our Bat Colonies

CEGSA directed its attention to the caves of the mountain chain from Fleurieu Peninsula to the Flinders Ranges, culminating in a National Speleological Conference at Quorn. The nature of these caves is much more diverse – each occurs in isolated outcrops and limestone pockets with their own special characteristics. One cave in the northern Flinders (Eyrie Cave) occurs in a mountain peak but contains massive stalactites and columns – evidence of a completely different very wet climate in a now dry area which has been completely geologically uplifted. Three other Flinders Ranges caves

(Wooltana, Oraparinna and Arcoota Creek Caves) contain historical relics of early guano mining – important remains of our early days of dryland settlement. CEGSA has discovered over 200 caves along the ranges, almost all being unknown in 1955 when the group formed.

Environmental Science and Tourism combined at Naracoorte in an intensive study of one of Australia's largest bat breeding colonies at Naracoorte, where up to 50,000 bats migrate across the entire South East and Western Victorian region to breed in only a single chamber in Bat Cave. CEGSA researchers recognised that these bats perform a major role in regional insect control but observed that the breeding population has been diminishing due to the effects of agricultural insecticides and land clearing.

Over a period of years following consultation with landowners, The SA Dept of Agriculture and CSIRO, the importance of preserving and maintaining the bat population at Naracoorte was explained and established. The result is a world first innovation of the Bat Observation Centre at Naracoorte where a series of underground infra-red cameras record the behavioural activity of the huge bat colony and relay it by TV screens to the Centre where the public can view and appreciate them – a view unavailable to almost all human beings and of immense educational value. A special extra benefit is that important detailed research can be undertaken by the biologists without needing to enter the breeding chamber at all, thus eliminating any disturbance to the colony and allowing it to significantly recover.

2000's -- Education, Publicity and the Future

CEGSA continues to be involved in research and recreational caving from one end of the State to the other. Secondary and Tertiary student groups, other Youth Activities and Scout groups are educated by CEGSA members on field trips to understand the scientific, environmental and aesthetic values of South Australian caves. The South East tourism area has acknowledged the importance and significance of caves by proudly choosing the name "The Limestone Coast" to identify and promote regional visitation. A series of major pollution cleanup programmes have rehabilitated caves and sinkholes, and South Australian cave research continues to be published internationally. CEGSA has reviewed all its involvement and activity by publishing its 50-year history in 2007 and is directing its energies to maintain and improve its contribution to South Australian environment, education and tourism into the future.

Ian Lewis.

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ANNUAL GENERAL MEETING

The Fifty First Annual General Meeting of the Cave Exploration Group (South Australia) Inc. will be held at the home of Damian and Amanda Grindley at 17 Miller Drive, HAPPY VALLEY on Saturday the 10th February at 7.00 PM for the presentation of the Annual Report and the election of the committee for 2007. All nominations must be presented prior to the commencement of the AGM.

Would all officers please present their reports to the editor by 31st January so the Annual Report can be printed for the AGM.

Festivities will commence from 3.00 PM with drinks and nibbles.

More details at General meetings and on the internet as they come to hand.

The Committee.



Caves, Craters & Critters

26th Biennial ASF Conference, Celebrating 50 years
of the Australian Speleological Federation
January 6th – 12th 2007. Mt Gambier, South Australia

Have you signed up for the conference yet? Well time is running out. Don't miss out on a jam-packed conference and celebration of 50 years of achievement around Australia. There are activities and events to suit all. It's also a chance to catch up with old friends from interstate, especially as it is 50 years and word has it several who attended the very first conference are planning to get their lights out of mothballs and come along to celebrate.

Activities you can expect at the conference include: Field trips all over the limestone coast, The Speleo Art Show, Photo Comps, A Speleo Quiz Night, BBQs, Snorkelling, Sculpting, and of course the Cavers Dinner and much more. Conference committee members have been working flat out organising various components. Kevin Mott whose been the regional co-ordinator chasing up a lot of the local resources, June MacLucas whose organised I believe one of the best Speleo Art Shows ever, Damian whose been promoting the art show and managed to obtain us a really god drop of red for the conference wine, Tim Moulds who's been organising presentations and abstracts, Richard Harris whose been working on the photo comp and getting Divers involved and Chris Gibbons who probably has one of hardest tasks keeping track of finances and registrations. Recently Tim Payne has come on board for the SRT Race, Athol for Quiz Night and chasing down our elusive 3D screen as well as being a Judge at the Photographic Competition and Adam Branford in Mt Gambier who's also chasing up resources and offering to lead some 4 Wheel Driving trips. We can always use more people to help lead trips.

We have been fortunate to obtain a few sponsors which is not easy in this day and age. Special thanks to Steve Bourne at Naracoorte Caves who has planned out a wonderful day for us at Naracoorte with a big focus being on cavers and community contribution to caves, The South Australian Tourism Commission who gave us a small grant and Scout Outdoor Centre who is supplying prizes for our SRT Race and Speleo Sports and who are also offering 20% discount to conference attendees during January on everything except specials, GPS, Scout uniforms, canoes and kayaks. We have also had support from Willow Vale who gave us a good deal on the accommodation, and Aussie printing who are doing a great deal on all our T-shirts, Satchels and Mugs.

Marie Choi.
Conference Co-ordinator, Adelaide



Government of South Australia
Department for Environment
and Heritage



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Advert:

CEGSA has several hundred ring binders surplus to requirements. There are 2, 3, and 4-ring types. All members are welcome to collect what they want from Records. A donation of time to help improve Records would be welcomed. There are many tasks that can be taken home to do.

Graham Pilkington.

CALENDAR OF EVENTS

Date	Type of Event	Description	Contact
22/11/06	General Meeting	Royal Society Room, SA Museum, Adel. DVD of 'Devils Sinkhole'. Xmas BBQ	Marie Choi
25/11/06	Working Bee	Library and records	Graham Pilkington
?/12/06	Caving	Flinders Ranges	Eddy Rubessa
13/12/06	Committee Meeting	TBA	Stan Flavel
	Caving	Pre Conference Trips	Damian Grindley
06 – 07 /01/07	Diving	Mt. Gambier. For ASF or CDAA Accredited Divers	Harry Harris
06-12 /01/07	ASF Conference	Mount Gambier	Marie Choi
13 – 14 /01/07	Diving	Mt. Gambier. For ASF or CDAA accredited Divers	Harry Harris
	Caving	Post Conference Trips	Damian Grindley
24/01/07	General Meeting	Royal Society Room, SA Museum, Adel. Conference and Field Trips Slides.	Stan Flavel
27/10/06	Working Bee	Library and Records	Graham Pilkington
10/02/07	AGM	17 Miller Drive HAPPY VALLEY	Damian Grindley
14/02/07	Committee Meeting	TBA	
14/02/07	CEGSA NEWS	Articles due	Athol Jackson
28/02/07	General Meeting	Royal Society Room, SA Museum, Adel.	
03/03/07	Working Bee	Library and Records	Graham Pilkington
??/04/07	ACKMA Conference		Grant Gartrell
??/12/07	Caving	Tasmania	Marie Choi
	Caving	Ongoing Vic Fossil Survey contact	Garry Woodcock
	Caving	Sellicks Hill contact	Grant Gartrell

It is desirable that caving trips involving club members should, where possible, be registered as CEGSA Trips. To do this, the nature and timing of the trip must be nominated to the Trip Liaison Officer and/or minuted at a General Meeting of Members. The member registering such a trip must be an accredited CEGSA Trip Coordinator and must agree to act in this capacity for the trip. There must also be an accredited trip leader with the appropriate skill endorsement to take a dependent party caving.

* Please note that trips not arranged by an accredited Trip Coordinator and marked with an * may not be classed as an official CEGSA trip and may not be covered by any CEGSA membership benefits. *

Also, please ensure that a report (preferably written) of the trip is submitted in a timely manner.