CEGSA NEWS

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

Volume 61 Number 1 **Issue 241** **FEBRUARY 2016**

CAVE EXPLORATION GROUP (SOUTH AUSTRALIA) Inc.

PO Box 144, Rundle Mall, 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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Website Trip Log	All Trip Coordinators	See list p9

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CDAA liaison	Ian Lewis	As Above
SA Scout Liaison	Ian Lewis	As Above

Cover Photograph: : Kilsby's sinkhole in Mount Schank is surrounded by limestone cliffs rising 20 metres above the water's surface, encircling a tranquil pool which reaches a maximum depth of 62 metres. (see articles on page 16)

Photo: Leon Rademeyer (Border Watch)

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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 61 Number 2 (Issue 242) must reach the Editor by Wednesday **11th MAY 2016**. 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 a memory stick or CD, in Word *.doc(x) or *.rtf files. Of course other forms of communication will still be gratefully accepted. Photographs are preferred to be in colour as separate files and note in the article where to be inserted. (*.jpg format under 500Kb unless for the cover).

GRAHAM'S POT

This is the first report that I can remember writing while in a cave, and appropriately it's Webb's Cave on the Nullarbor. A survey has finally been made of this often visited cave and it turned out that it's much larger and more unusual than we thought. How many other caves do we have that we regularly visit but lack a map? Gloop Cave was one! I recommend that all Trip Leaders find out before visiting their next cave, and survey those that require it. Some of our maps don't pass scrutiny because they were made using "primitive" surveying gear or even just drawn from estimated measurements hence those caves can be added to the list of those that need a survey. There's also the opportunity to complete the detail that many surveys are lacking. Most surveys concentrated on the traverse line with some wall detail added. Early maps usually included floor and roof descriptions sadly lacking from later maps. However, very few surveys accurately described such things as rocks, even when some were huge and most speleothems were placed in the general vicinity of where some were and rarely scaled to size.

CEGSA used to be a prolific map-making club but now produces very few. It could be because all the caves have been surveyed and no new ones are being found. This is partially true but I believe that the culture of surveying is not being passed on to our newer members. It's surprising how many people accept the existence of a map without realising how it came into being; maybe this comes from the constant use of street maps. I've even heard it said that we cannot go into a cave yet because we need to wait for a map of it!

Graham Pilkington

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Annual General Meeting Report

The Annual General Meeting was held at the home of Graham Pilkington on Saturday 13th Feb.
The Annual awards for 2015 were announced and Mark Corbett was presented with the Spirit of Caving "for his caving enthusiasm over the past year" and Athol Jackson was presented with a Certificate of Merit for "for his persistence in the roles of editor and printer through changing technologies and reticent cavers".
The Annual Report was presented and accepted, followed by the election of officers and committee. The results of the election were as follows:

President:	Ian Lewis.
Secretary:	Matt Smith.
Committee Members:	Chris Gibbons, Steve Milner, Graham Pilkington, Mark Sefton, Ken Smith.

The meeting was preceded by a social gathering and BBQ tea.

Athol Jackson.

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2015 AWARDS

Spirit of Caving

Mark Corbett

For his enthusiasm for caving.

Certificate of Merit

Athol Jackson

For his persistence in the roles of editor and printer through changing technologies and reticent cavers.

Graham Pilkington

TRIP REPORTS

CAVE PARK CAVE TRIP REPORT

Sunday 26th July 2015

By Neville Skinner and Ian lewis.
Photos by Neville Skinner.
Trip participants: Thomas Varga (FUSSI), Edwina Virgo (FUSSI), Aimee Leong (FUSSI & CEGSA), Neville Skinner (FUSSI & CEGSA), Ken Smith (FUSSI & CEGSA), Graham Pilkington, Damien Pilkington, Isiah & Juliet Pilkington (CEGSA), Ian Lewis (CEGSA), Steve Milner (CEGSA), Cameron Roy (Scouts & CEGSA), Mark Corbett (Scouts & CEGSA) and Heather Siebert (Scouts). Our apologies if any names ARE missing.

The day started with the crew from CEGSA, FUSSI & the Scouts arriving at the Cave Park cabin where we were staying, to check out the accommodation facilities.

CEGSA and the Scouts inspect our salubrious lodgings; Aimee in foreground (as always!)

From there we drove down the road to the owner's house, where we checked to see if anyone was home. It came as no surprise to us that there wasn't, as Ian had told us they might not be home. We then walked up the hill from the house to get our bearings, and for Ian to relocate the cave, after many years of not having visited it. Once located, we walked back to retrieve the vehicles, which we parked quite near to the cave. Ian spent 20 minutes waving his arms around in all directions explaining the relationship of Cave park Cave to Victoria Fossil Cave across the paddock plus several other outcrops and solution pipes etc in the space between the two cave systems.

It was disappointing to see the entrance totally covered with blackberry vines, and Graham said that cavers had in the past undertaken to keep the blackberries under control. Graham then looked around for a smaller, more restrictive entrance, which he thought might be easier to access once the vines were removed. And so, with much vigour the Pilkington clan (primarily) grabbed a saw and a couple of hand tools and commenced to rout out the blackberries covering this entrance. After 20 mins it looked better, you could actually see the entrance, but it failed to inspire. It was about 200mm high at its highest point and 350mm wide, and still there remained encroaching blackberry vines and roots, making it a very unattractive option.

Ken watches on while Graham & Damien attack the blackberry vines

With that, the majority of those present went back to the main entrance to see what was happening there.

Cameron, with the help of Mark & Heather, had identified a small solution tube near the main entrance that was clear of the blackberry bushes and had rigged up a wire ladder with belay rope. They were ready to assist members to enter the cave.

Cameron Roy (Scouts) rigs the cave while the group wait to enter

One by one we attached (mainly borrowed) harnesses and climbed down the wire ladder on belay. Of course I couldn't see the point of climbing down the ladder when I was attached to a belay rope so I just let the whale-tail do the work.
The walls of the entrance area were wet and covered with a green moss, interspersed with some very old graffiti, while the floor was covered with ivy, competing with the blackberries for real estate.

Entering on belay via solution tube, while Mark & Aimee look on

Once we were down we re-grouped into small groups under the collapsed cave entrance/chamber. Ian handed out maps to each party with some heading off in a WNW direction, while Aimee, Thomas, Edwina, Heather & myself headed off into a small tunnel heading in a south-easterly direction, before winding around to the north-east and steeply upwards, to bring us into a decorated chamber containing a wall of flowstone and a few stalactites.

Aimee entering chamber east of the entrance **Flowstone decorations in first chamber**

Edwina & myself noticed what looked like a couple of tunnels heading off high up in the rear of this small chamber, so we clambered up and I went one way and Edwina a short time later went the other way, after I complained the tunnel I was in was getting very shallow. Luckily, it was in deep sand at this stage so I dug my way on, pushing the sand aside to get through. I could see Edwina progressing through the other tunnel just a few metres away, almost effortlessly, and I realised that the tunnel she was on would converge with the one I was digging my way through. Hummmph!

At the point where these two tunnels met, I turned left into the other tunnel, and after going through a tight restriction into another low flattener I could see daylight just ahead. A bit further and I identified this as the low entrance that had been covered by Blackberries. Another Huummph!

I then exited back the way I came, and as I did so Edwina announced her eagerness to see the area for herself. I could not imagine why.

Once Edwina returned we regrouped and headed back to the entrance chamber, whereupon we found Ian Lewis with Mark, Heather, Cameron and others examining a large group of Southern Bent Wing bats roosting in two budding solution tubes (avens). Ian said he estimated there were about 1000 bats in that area, based on an estimate of 100 clustered bats per square foot.

After this we turned and headed down a low, wide flattener in a northerly direction initially, before turning NW into a narrower section, then through a very tight restriction into another chamber.

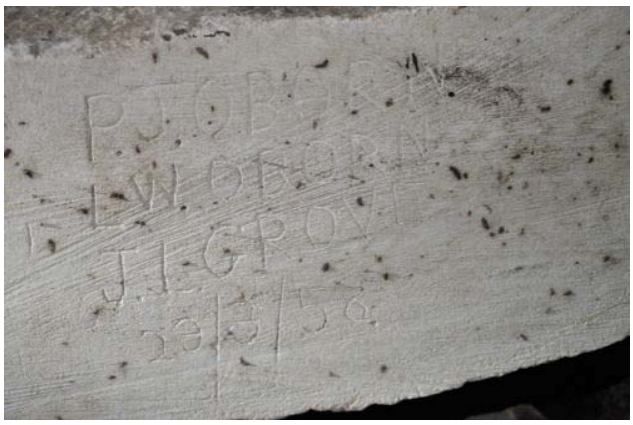
Heather entering the final northern chamber

Coral formation on low ceiling

This chamber had some nice coral decoration in it, as well as a section of flowstone. I pointed out a nice sea-urchin fossil on one of the rocks and others were busily checking out other features. After the initial excitement dulled, a couple of the FUSSI people started to lie down and rest. I imagined it was because they had not visited the coffee shop that morning, and their stress levels were subsequently reduced.

After we left that area, Thomas, Ken & myself decided that while the others were exiting the cave we would head down the other main tunnel that headed in a ESE direction. However, there was little to see except for rock-piles, and a couple of crawl-ways through the middle of the rockpile right at the end, with another crawl-way between that same rockpile and the easterly wall of the tunnel.

It was just short of the end of this main tunnel that a smaller tunnel headed east for about 30m before it too was blocked by more rockpile. As we headed out of this smaller tunnel I stopped to take a photo of some graffiti, put there by P & L. OBORN and J. GROVE on 23rd March 1958.



P.J.OBORN, L.W.OBORN, J.L.GROVE, 23/3/58

Solitary CHOCOLATE WATTLE BAT

At this point I noticed another Chocolate Bat on the side of a ledge in the ceiling, and took a photo of it.
For this photo I took the time to change lenses to my close-up 105mm lens, which I was carrying in my camera bag, just in case. I took care not to disturb the bat, and we left the area with the bat still at rest in the same spot. Its presence was pretty amazing as it was not part of the large group close to the entrance and obviously knew its way around this twisty series of flat crawlways and small chambers. Why did it choose such a remote spot? And why on its own? Ian said there are a couple of examples over the years of ‘Lone’ bats roosting in the same remote spots in South East caves.

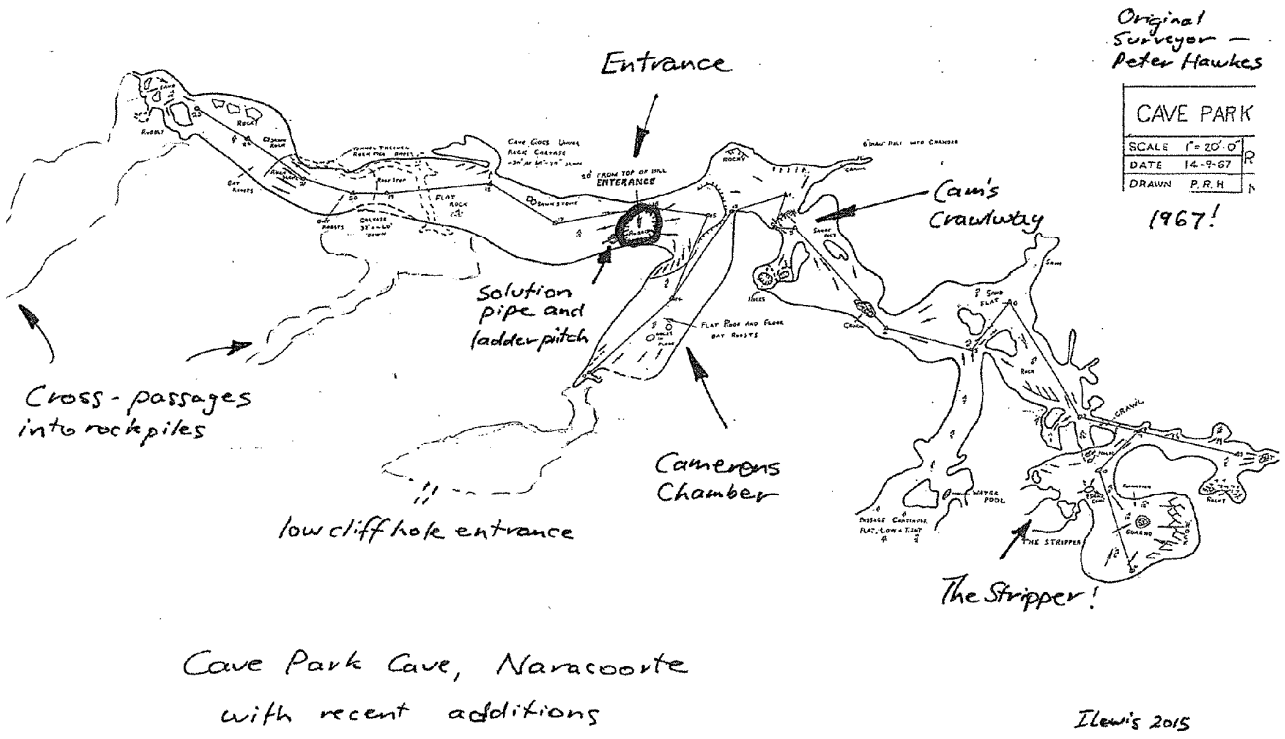
Solitary Chocolate Wattle Bat near southern end of cave

We were the last to head out of the cave, and Cameron was waiting on the surface to provide belay for us.
When we arrived back at the vehicles, we had been in the cave for close to 4 hours. It was time to leave.

Additional comments about the Cave Park Cave trip – the day, the map and Cameron Roy

This trip was organised to take advantage of having plenty of representatives of the three SA caving groups – CEGSA, FUSSI and the Scout Caving Group - already at Naracoorte for the National Parks Search and Rescue exercise in Fox Cave on the previous day.
Cave Park Cave has hardly been visited by caving groups in 40 years. Ruth Lawrence and I ran a Latrobe University field trip into it a few years ago and the Outdoor Ed and Geology students found three unmapped or unexplored extensions. These are marked on the accompanying map by dashed outlines heading to the southwest. One connects with a small entrance hole at the top of the cliff slope heading towards Mosquito Creek. This is the one that Nev's report shows being cleared of blackberries by 'Clan Pilkington'.
So it was a great opportunity to show about 20 people a cave which was new to them and pass on old knowledge to combine with the new discoveries. Teams soon found out what 'The Stripper' was – and I'm not going to tell you so you'll all have to see and experience it for yourselves! Needless to say (and as part of an increasing personal trend), I found elaborate scientific excuses to avoid going through that end of the cave.
The cave got a good workover and people investigated various side passages which didn't match the map. This cave is one of Naracoorte's 'major' caves and certainly warrants a lot of systematic exploration. Peter Hawkes mapped the cave in the year that I joined CEGSA (1967 – no, not 1867!). Pete was a quiet but inspirational natural leader who took lots of us to fascinating remote caves and digs in the late 60's. I caught up with him and others at reminiscing slide night a couple of years ago. One of Pete's claims to absolute fame was that he was one of the four in the Mullamullang party that climbed 'The Dome'.So Cave Park cave definitely needs more visits and a total upgrade and re-map. In winter it's a hibernating cave for bats after they leave Bat Cave following the breeding season. The entrance is full of blackberries and we offered to the owners to return and clean them out on a weekend working bee some time in the near future. We are grateful for Rick and Robyn Mencel's

permission to visit the cave. They care about the cave and a few years ago instigated a huge cleanout of the wire and rubbish that had accumulated in the entrance over a century or more.



You will see on the map two named locations in the cave – Cameron's Chamber and Cam's Crawlway. In this edition of CEGSA News is a tribute to this very popular, energetic and talented young man who was moving from an extensive rockclimbing and skiing background to more caving leadership. Cameron had been caving with CEGSA, FUSSI and SCG members over the last few years and had been taking an increasing interest in the nature of caves, their structure and formation, the life within them and explanations for their features. Not long before this cave Park trip, he led a trip to four caves in the Flinders Ranges during which there was much discussion about limestone, geology, exploration and cave conservation, together with a developing interest in CEGSA's history. He was good at extracting lots of information from me!

Cameron's Chamber is one of the bat hibernating rooms. On this Cave park Cave trip day, I was sitting there looking at the geology of the walls and also observing a bat cluster of about 1000 bats tucked away in an aven – their presence was quite a surprise because Robyn had checked the evening before and there had been no flyout for night feeding. So I sat there and quietly advised each caving team to move through without disturbing them, but also taking the opportunity to show them the bats, explain about their life cycle, how to estimate their hibernating numbers etc for the benefit of all in the cave. Cameron sat with me quietly for a long time while we discussed these things and about the cave's formation in general. We then moved out of the chamber to the start of the crawlway to the east and spent more time looking at small fossil bones there, talking about how the cave changed its nature where the rooms flattened.

Later on, I sat with Cameron at the top of the ladder pitch while everyone was exiting the cave. He had set that climb up for everyone at the start of the day at his own initiative as the easiest entry point and took responsibility for everyone's safety climbing in and out, happy to help people rather than race off and be the first explorer into the cave. We spent that considerable time talking about the philosophy of cave exploration and the unique environmental records which caves contain, plus the sheer enjoyment that they can provide for scouts and other young cave explorers.

A few months later we lost Cameron. Neville has written about the achievements of his life, his popularity and the darkness of Depression which he concealed from everyone but which somehow overwhelmed all the positive experiences of his life and his giving to others. Cameron was becoming more deeply interested in caves and speleology. At his funeral I spoke of this caving trip which I think was his last one and we have named the chamber and crawlway where he was absorbed with interest and at peace with himself on that day. We will think of him with fondness and a sense of loss but two special places in this cave that were important to him will keep his memory for us.

Ian Lewis.

3D LIDAR CAVE MAPPING TRIP

Written by Tim Featonby (Dec 2015)

People on the trip: Tim Featonby, Kevin Mott, Thomas Varga, Steven Whyte, Bec Harmer and Dave Hurst

This trip was a trial more than a trip, as the intention was to ensure that the process for the project, 3D Lidar Cave Mapping, including access arrangements, technology, reports and dissemination of information was going to work. As such this report is also brief.
Put simply, Lidar, or LIDAR is a remote sensing technology that measures distance by illuminating a target with a laser and analysing the reflected light.
We went to Snake Hill and Mt Burr caves where we were guided by Kevin Mott.
3d Lidar scans were made of the cave with some limited atmospheric data taken.
Two spider specimens were taken and sent to Institute of Molecular Biology in Brisbane, who are identifying them and investigating the toxins produced by them.
A sample of bat guano was taken from Mt Burr cave and this was sent to Dr. Michael Snow for mineral analysis, at the SA Museum.
A third location was visited where teeth were discovered and later identified as Thylacoleo carnifex.
The trip was a success with little caving done but it has proved the process and the technology was going to work.
The intention is to open up these research trips to all with some limits on numbers due to the delicate nature of the cave and land owner requests.
It is hoped that the project will really get underway in 2016 with both FUSSI and CEGSA members involvement.

Editor's note –
Tim is a Cave Diving Instructor and owner of a 'Zebedee' 3D cave mapping device which is being utilised for cave research on the Nullarbor and in the South East. Recently it was used at Naracoorte to record in detail a constriction in Bat Cave where all the bats fly out – this data was used in the development of a detector for that passage. Tim is a FUSSI member and is soon to join CEGSA.

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Corra Lynn Cave, 5Y-1, 24th January 2016

Participants: Graham Pilkington, Charni Pilkington and son Jamie Schmidt (9), Marie-Josee Kasputtis and sons Lee (9) and Francis (7), and Jai Parsons (7).
A fun trip for the youngsters. In the morning we visited Grand Central, the Rope Crevasse, and the Crystal Maze. The afternoon trip was to the Bushwalkers Chamber from where the kids explored until we had to recall them to get them home before bedtime.

Graham Pilkington

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Nullarbor trip to Webb's and Witches Caves in 2015

Participants: CEGSA: Graham Pilkington and Ray Gibbons
SUSS: Alan and Megan Pryke.

Both Webb's and Witches Caves have been excised from the Mundrabilla Station lease and fenced off to prevent stock but not native animals from gaining access. The Webb's enclosure is about 700m NS and 500m EW and includes Snake Pit, whereas the Witches enclosure is close to 510m square. Two signs have been erected at each entrance, except for Snake Pit, one close to the doline entry point to warn about the dangers of entering caves and what is needed to do so (except for a permit being required!), and the second 10m or so further out about horehound and how to reduce its distribution plus a small anomalous aside about requiring a permit to enter the cave.

Webb's Cave
The survey, grade ASF 55, was made using two DistoX units (these measure distance, bearing, inclination, and plan distance with the click of a button). This enabled us to have two teams to make a fast detailed accurate map without the need to clamber all over the cave. About 5km of survey legs was made and somewhere near to 100km of radials to measure the positions of walls, pillars, columns, speleothems, roof-steps, rock slabs, rockpiles, and all the other cave clutter. Most obvious passages were surveyed except for a few places that although having a breeze, were constricted by tight clusters of columns that we named "thickets" with no obvious way through without doing

damage. Sometimes further surveying located the other side of a thicket. These thickets are in horizontal flatteners 0.5 to 1.5m high with flat roofs but sometimes having floor troughs. We also left unsurveyed a couple of floor holes, one of which is known to have 30m or more of passage. From the processed drawn up survey we will be better able to assess what still needs doing or checking. Many more long and cross sections need to be made. With a cave that is measured in aerial extent rather than passage length, selection of long and cross section locations can be difficult.

From the survey, we find that Webb's is mostly under the south and east edges of a shallow depression. No map is available of Snake Pit, but previous entry locates the entire cave under the northern side of the depression separated from Webb's by about 200m underground. The entrances are 500m apart. Many areas of the cave are thought to have been first entered on this trip, especially on the west and south-west because of the complete lack of any marks that are usually associated with travel though small tunnels. It was interesting to note that many floors that are known to have been previously traversed had been re-levelled. From observation, it is surmised that black-coloured beetles trolling the floors are responsible for this, not air blowing through the cave that might otherwise be considered responsible.

Webb's Cave has an abundance of speleothems. Most of this is a dark calcite in the form of columns, stalagmites, stalactites and flowstone. Much of these are shattered by natural causes with the most "damage" being close to the doline. Very close to the entrance all that is left are stumps but by 80m into the cave full if cracked columns are present. A few calcite stegamites were seen, one in the *Arboretum* being about 2m long and 1m high. A few dry rimstone pools were found; one with black "Lilly pads" and another that would have been deep enough to bathe in. What at first appeared to be new calcite growths were then thought to be gypsum columns and other depositional forms but on analysis these proved to be halite. Many ceilings and some of the translucent halite columns – up to 3m tall - have a thin crust of white crystals of halite. A few isolated gypsum flowers were seen on roofs but never more than 15cm long. No live calcite was observed.

Seven small mineral samples were removed for analysis by Mike Snow at the South Australian Museum. One was to identify the "new" translucent speleothems and one to test the rock a few metres under the doline lip. The other five were to look for complex biologically initiated minerals generated from probably old guano deposits. See attached report.

Some of the palynological items noted from the cave included a disarticulated dog skeleton, probably dingo, found in the phreatic tunnels 10m west and 30m below the NW corner of the doline; several thylacine skulls including 2 about 10cm long separated by 15m; a mummified roo with a Joey skeleton 1m away; other roo skeletons in the entrance area; several bird remains including a few that were hundreds of metres into the cave; many dead bats on the floor and hanging from the roof, walls and rocks: some could be thousands of years old. A pile of hundreds of bat wings in a constriction close to the entrance has been there for a while with a marked track re-aligned to avoid going over them. The floor had a scattering of scats throughout most of the cave. Some appeared to be from bats but dog-like scats were numerous (thylacine?). Others looked like possum droppings – dark and ovaloid, measuring about 2cm by 1cm - and found only in a few isolated but widespread patches that looked like nesting sites. Several floor scoops approximately 1m by 0.5m and 0.1m deep were seen in sand from fretting and might have been made by thylacines.

Black-coloured beetles, both dead and alive, were very common throughout the cave. They appeared to be searching and usually on the move over dirt floors. They had eyes, and short legs and antennae.

At least a couple of hundred bats were using the cave. 55 were counted leaving the cave one evening at dusk with counting stopped by poor light. We could not be sure but there might have been two species of bat, one larger than the other by about 50% but only 10% of those exiting. During mapping we encountered the occasional bat or two with several clusters seen, the largest estimated at 100, another at 20 but most of 10 or fewer. These bats were a dark brown colour and had an approximately 6cm long body. They did not appear to favour any particular section of the cave except that they were all in the dark zone. Bat guano deposits were everywhere. Very old ones in the form of a loose dusty powder covering many square metres of flat floor and maybe up to 0.2m deep but the majority were what we termed "tyre rings" typically 0.3m diameter. These rings, part rings and ridges were 0.1 to 0.3m high but typically about 0.2m high, and appear to be the outline of roosting sites; many were fresh and "tarred". They covered the floor of many of the inner passages and chambers indicating that the bats do not have a preference as to where they roost but appear to avoid roosting in any place that has had the guano deposit build up on the floor below. Webb's has a pervasive smell of guano and urea.

Approximately 100 Welcome Swallows are using the doline under hangs. It was always pleasant watching them return each evening in small groups to add to the swirling swarm over the doline. I think that they orbited anticlockwise but it would be interesting to see if this was consistent and common across the Nullarbor. The swallows always went in to roost before the bats exited. Something of note was the distinct lack of flying insects near Webb's Cave. Because almost all our time was spent here, we were surprised on camping near Witches Cave at the greatly increased number of pesky insects. Witches has few – maybe only 6 or so – swallows. Another study subject on offer is the relationship between the number of flying insects and the number of swallows as a function of distance from the cave. Maybe it's the local environment being suitable for the insects and not the presence of the birds that's the difference.

Of anthological note, a collapsed wooden table (?) was found under the western lip of the doline. Close by were 4 whole but old beer bottles and possibly the remains of 2 more scattered around the site and obviously washed down further into the cave. We extracted the glass items – and a few other bits of human generated rubbish - and took them to the Eucla tip along with our own accumulated camp rubbish.

A cat was seen leaving the cave from the NW corner of the doline, immediately followed by two mature but frolicking kittens. They climbed up the doline wall at that point, which has a rockfall, and headed north. This could explain the distinct lack of reptilian life in and near the doline.

Witches Cave

A survey, grade ASF 55, was started but a long way from completed. Most of the unmapped section is the northern complex of very wide chambers with multitudes of columns. Both the western and eastern lead-ins to this area along the "ring-route" were mapped as was the rest of the ring-route. We possibly entered an area of cave never previously entered that heads back towards the entrance from the extreme east just south of the ring-route passage. The ring-route and lead-in from the entrance were route-marked in 2011.

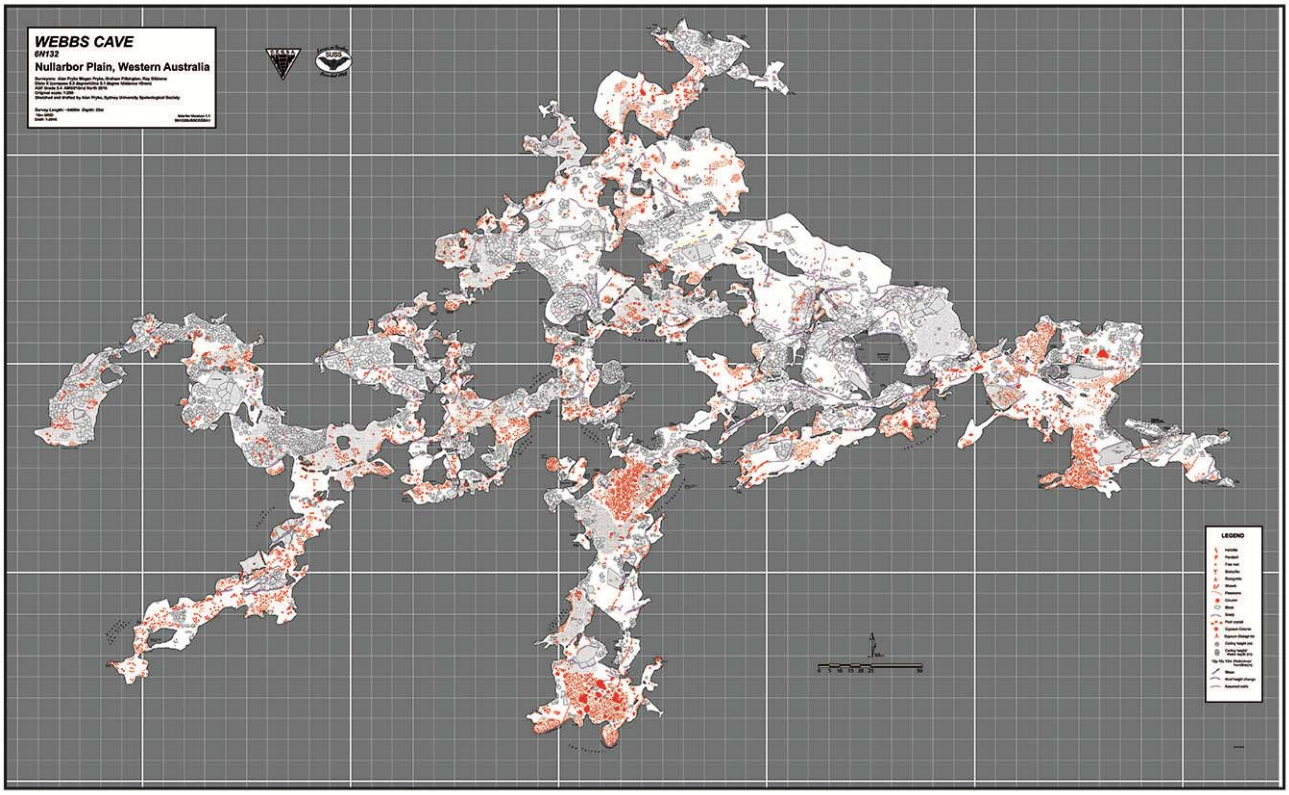
A previous survey appears to have been made; "A" stations in the entrance area and "B" stations along the ring-route. However, consecutive stations were a long way apart hence I suspect that wall and interior detail was poor. We tied into some of these stations

Witches has a similar biota to Webb's but in greatly reduced numbers. Only a few bats were seen and these were in the extremes of the cave. It should be noted that guano "tyre rings" are common in the far east passages and that horehound was blocking the flight path at the doline entrance hence the low bat count may be temporary. The horehound was cleared from the doline entrance and this should help the bats. Such clearing will need to be done regularly to keep the bats using the cave. Instead of mummified roos, we had mummified rabbits. The dark beetles were again common but this time we also had crickets near the entrance.As in Webb's, much old calcite speleothem was present as well as halite columns, stalactites and crusts, however, the halite was not as common and some live calcite stalactites were noted.

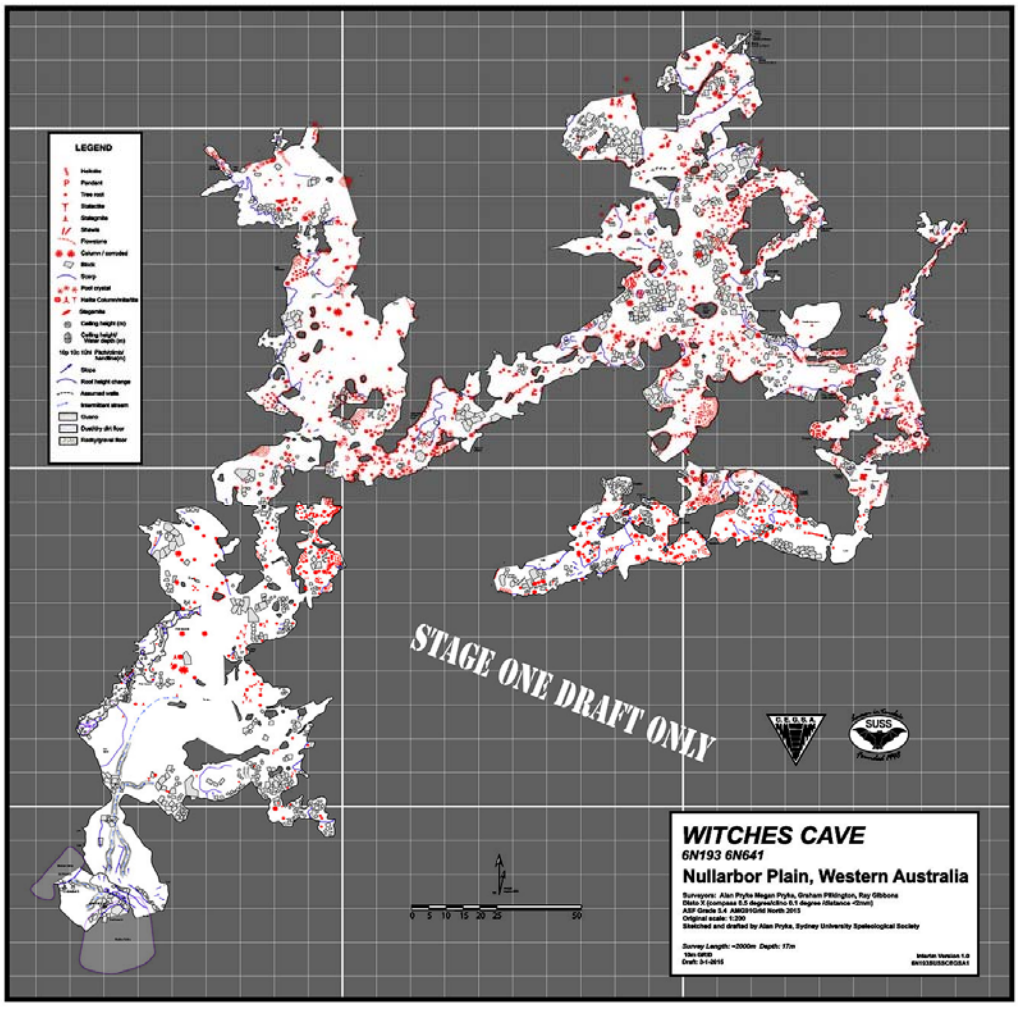
Footprints in the wash-in zone were absent indicating a large downpour event had occurred recently. Footprints in the powdery soil further in were still visible but much degraded into shallow indentations probably by the same process that is happening in Webb's. Rumours are that at least one trip into Witches was made in early 2015 and several since 2011, hence the natural removal of "trog marks" has been extremely rapid. A time-lapse photo-monitoring project needs to be set up to discover just what is removing footprints and how fast these changes are occurring.

On a sad note, the weed horehound appears to be adapting to the Nullarbor and can now be found on the plains and along tracks well away from the dolines that it's been infesting for decades to the detriment of all the native vegetation that requires that special environment. However, it still appears to need the extra water created by runoff off rocks or tracks but with rabbit numbers increasing again, its spread will continue.

Graham Pilkington



Map of Webb's Cave drawn by Alan Pryke.



Map of Witches Cave drawn by Alan Pryke – very preliminary:
many areas of wall and interior detail not yet surveyed, many open leads,
the central-north of the cave has not been surveyed.

Report on Webb's Cave samples collected in 2015
Michael Snow, SA Museum, 0408400081

Comment: Some specimens show quartz and weddellite (calcium oxalate) is very common in the cave. This is remarkable as it is a rare cave mineral. Either this insoluble mineral has been precipitated quickly or the enzyme(s) to degrade it are not present.

Sample 1: Entrance Greyish lumps to 4 mm
Predominately pure calcite with a small amount of quartz (sand).

Sample 2: "Pre Stand" arrow-shaped specimen.
Tite or mite primarily of halite (salt).
Small amount of magnesium calcite and even smaller of pure calcite.

??Formed from sea spray with the calcite(Mg) from the limestone rock and Mg in the spray. The small amount of pure calcite could be due to rain action on the limestone.??

Sample 3: Adjacent to survey station 15224.
1. Dung pellets with no mineralization and 2 other pieces.
2. A Black lump showing calcite, gypsum and weddellite (calcium oxalate dihydrate).
3. Crystalline piece with nice crystal faces. Calcite.

Sample 4: Brown powder and some lumps from the Arboretum floor.
Magnesium calcite (major) and weddellite (minor).

Sample 5: "floor" lumps and fines from NE chamber.
Interesting complex guano mixture with
Calcite (Mg), aphthalite, weddellite, biphosphammite(K)

Sample 6: One large lump and fines from floor of passage SE of the Arboretum.
Complex guano mixture with

Lump: Syngenite (Ca,K sulphate), Biphosphammite (K) and other sulphates.

Fines: As lump plus quartz and weddellite.

Sample 7: "roof" big lump with fines from above sample 6.
Calcite Mg, gypsum, weddellite, possibly newberyite and another minor mineral.

Michael Snow.

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Past Trips from General Meetings

November 2015

1. *Ian Lewis* was Trip Leader for a Scout Leaders only trip into Fox Cave.

January 2016

1. **George** & **June MacLucas** visited Wee Jasper Caves in December, despite numerous car troubles on the trip across. Managed to stay underground for 5 hours as part of several tourist trips. Also visited Signature Cave and Punchbowl Cave. The caves were quite wet and muddy, and quite big.
2. **Matt Smith** & **Mark Corbett** visited Gloop in December with 80 Venturer Scouts, and then again in January with family.
3. 4 kids 3 adults attended a Corra-Lynn Trip with **Graham Pilkington** in January. Kids were young but were taken to parts of the cave appropriate for them.
4. **Graham Pilkington** visited Webb's and Witches Caves in December to do some further surveying. The survey for Webb's cave is now almost twice the size of the last survey in 2015.
5. **Neville Skinner** visited Mt Gambier with Deborah Johnson from SUSS visiting Wrecked Car & Monbulla Caves, Gran Gran and Quarry Cave and then Three Sisters.

TECHNICAL and OTHER ARTICLES

MEMBERSHIP FEES

If you have not renewed by 31st March this will be your last communication.

CEGSA MEMBERSHIP FEES became due on January 1st. To ensure continuity of membership and privileges (particularly insurance) please pay before March 31st.

Joining fee applies after March 31st.

CEGSA MEMBERSHIP FEES FOR 2015 YEAR

Full Membership	$ 45.00
Full Country Membership	39.00
Associate Membership	37.00
Long Term Associate	45.00
3 Month Introductory	5.00
Joining Fee (N/A to 3mth Intro)	12.00
Discount for Country Membership	6.00
Print Form CEGSA News	25.00

ASF LEVY FEE FOR 2015 YEAR

Single	$ 68.00
Family	117.00
3 Month Introductory	20.00
Journal Subscription	25.00

2015 YEAR FEES

	CEGSA	+ASF	TOTAL
Full Membership	$45.00	$ 68.00	$113.00
Full Country Membership	39.00	68.00	107.00
Associate Membership	37.00	68.00	105.00
3 Month Introductory	5.00	20.00	25.00

Variation for Family Membership

1st Full Member + 2nd Full Member	$90.00	$117.00	$207.00
1st Full Member + 2nd Associate Member	$82.00	$117.00	$199.00
1st Assoc Member + 2nd Assoc Member	$74.00	$117.00	$191.00

Discount for Country Membership applies for Family Memberships.

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

Membership Fees can be paid direct into CEGSA Account BSB 105-900 Account No 950661040 and reference with your Name, CEGSA Fees or Membership Number.

Chris Gibbons. Treasurer/Membership Officer.

Approved CEGSA Trip Leaders

Name	Caving Leader level
Marie Choi	Horizontal, Laddering and Vertical
Stan Flavel	Horizontal and Laddering
Grant Gartrell	Nil
Chris Gibbons	Nil
Paul Harper	Horizontal, Laddering and Vertical
Richard Harris	Horizontal
Lance Hoey	Horizontal and Laddering
Peter Horne	Horizontal and Laddering
Peter Kraehenbuehl	Horizontal, Laddering and Vertical
Ian Lewis	Horizontal and Laddering
George MacLucas	Horizontal, Laddering and Vertical
June MacLucas	Horizontal
Steve Milner	Horizontal, Laddering and Vertical
Tim Payne	Horizontal, Laddering and Vertical
Graham Pilkington	Horizontal and Laddering
Eddie Rubessa	Horizontal and Laddering
Mark Sefton	Horizontal and Laddering
Matt Smith	Horizontal and Laddering
Tom Szabo	Horizontal and Laddering
Gary Woodcock	Horizontal and Laddering
Michael Woodward	Horizontal, Laddering and Vertical

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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Property Owner seeks to expand tourism beyond cave divers

Text and photos by Leon Rademeyer (Border Watch)

TRANQUIL POOL: Kilsby's sinkhole owner Graham Kilsby at the water's edge on his Mount Schank property. Mr Kilsby wants to make the hole accessible to people other than just cave divers.

DESCRIBED by cave divers as one of the most spectacular sinkholes in Australia, Kilsby's Hole on the outskirts of Mount Gambier remains an unseen wonder for all except a handful of highly trained and experienced divers.
Famous for its crystal clear waters and static diving conditions, the hole offers spectacular views from above and beneath the water's surface.
Limestone cliffs rise to 20 metres from the water's surface, encircling the tranquil pool which reaches a maximum depth of 62 metres.
It is for these reasons that landowner and prime lamb producer Graham Kilsby believes his sinkhole should be developed to become an attraction to people other than cave divers.
"This place is a unique Mount Gambier drawcard in need of some development to make it more of a destination than just a stopover," Mr Kilsby said.
"It is situated midway between Melbourne and Adelaide and there is no reason why this sinkhole shouldn't be enjoyed just like any other tourist destination along the way."
The sinkhole is situated on a 1200 acre property at Mount Schank where Mr Kilsby manages his first cross Merino and Border Leicester flock of 2500 ewes.
"As a first step, I would like to develop bathroom facilities and a kitchen and barbecue area where divers would be able to kit-up and have meals sheltered from the wind and rain, especially during Mount Gambier's long winter months," he said.
"The second phase would be the construction of dormitory-style accommodation and a couple of cabins for tourists, visiting school groups or even businesses seeking a team-building facility."
The first phase will cost $70,000 to complete, but such a financial outlay, coupled with the cost of public liability insurance, will not be viable for Mr Kilsby since it far outweighs his lease income from the Cave Divers Association of Australia (CDAA).
The CDAA has leased the sinkhole directly from Mr Kilsby since 2007 with around 400 divers visiting the site last year under the CDAA's auspices. "Ideally what is needed is a State Government grant to open the place to a wider audience, to share the beauty not only of the sinkhole, but of the lower South East as a whole," Mr Kilsby said.
"I've had a film crew here shooting for the Australian Coast television series as well as school children snorkeling and have also been approached by free divers to use the site.
"We have something special here, a natural feature which I would like to share with like-minded people."
The hole was one of the first sinkholes to be explored by divers in Mount Gambier in the late 1950s and has claimed the lives of three divers - a tragic double drowning in 1969 and a Melbourne man who died while diving with a partner in 2010.
The South Australia Weapons Research Establishment leased the hole in the early 1970s for secret tests of the Barra Sonobuoy, a device designed for detecting submarines, and it has been leased by the South Australia Police Underwater Recovery Unit for diver training since the 1980s. Police have constructed a pontoon on the water's surface to provide easier access and erected a large platform on ground level from where equipment can be lowered into the water.
Mr Kilsby said aside from steps cut into the limestone by his father to enable safe passage to the water, along with the police team's modifications, the sinkhole remained as it was thousands of years ago.

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Hole Lot of Tourism Potential

Free divers have expressed interest in exploring the spectacular Kilsby's Hole on the outskirts of Mount Gambier after landowner Graham Kilsby recently highlighted his intention to develop the site and expand its use beyond cave diving. Mr Kilsby told *The Border Watch* he had been approached by a group of free divers from Melbourne wanting to explore the hole to gauge its suitability for their style of diving. Free divers operate without traditional scuba diving gear, simply holding their breath as they to explore the depths below. Mr Kilsby said the hole would be perfect for most types of diving as well as snorkelling since it was known for crystal-clear waters and static diving conditions. Although Mr Kilsby has been approached by a variety of interested parties, the hole remains a premier destination for cave divers from all over Australia with more than 400 visiting the site annually. One such diver is Ian Lewis - believed to be Australia's only professional cave-diving geologist. Mr Lewis visited the site earlier this month as the Cave Divers Association of Australia (CDAA) science officer to once again explore the ancient hole, which may have been formed hundreds of thousands of years ago. Mr Lewis, who works as a hydro- geologist at the Department of Environment, Water and Natural Resources in Adelaide, is nearing completion of a PhD at La Trobe University on the formation of large caves in the SouthEast.

CAVE-DIVING MECCA: Cave divers explore Kilsby's Hole at Mount Schank. More than 400 members of the Cave Divers Association of Australia visit the site annually.

Mr Lewis has a particular interest in Kilsby's Hole since it has, as a relatively young sinkhole, many clues relating to the formation of older caves and sinkholes in the region.

"Most Mount Gambier sinkholes are circular or cone-shaped and between 30 metres and 50 metres deep," he said. "Kilsby's doesn't fit that description since it has straight, cliff-like walls and an overhanging shape, which could mean that it hasn't been eroded to a cone-like shape yet.

"This may mean its formation started later than many of the other big sinkholes."

Mr. Lewis said a geological fault line could be seen in one of the sinkhole's walls, which is one of three major fault lines responsible for cave formation and for the Mount Gambier and Tantanoola volcanoes.

GEOLOGIST DIVER: Ian Lewis, Australia's only cave-diving geologist, ready to explore Kilsby's Hole near Mount Gambier once again. . Mr Lewis is completing a PhD at La Trobe University on the formation of large caves in the South East.

DIVING BUDDIES: Ian Lewis and Peter "Puddles" Horne from the Cave Divers Association of Australia before exploring the underwater wonders of Kilsby's Hole on the outskirts of Mount Gambier. The hole is renowned for its crystal-clear water and static diving conditions.

"Caves formed along large fault lines running through the Naracoorte, Tantanoola and Mount Schank areas," he said.
"There are over a thousand caves and sinkholes across the South East region, but some, like Kilsby's Hole, are much larger than others.
Our studies have shown that it's because erupting ice age volcanoes produced carbon dioxide which was forced up through these fault lines to acidify the groundwater, which could then dissolve the limestone at a much faster rate, forming larger caves and holes in some areas."
A sinkhole forms when a cave-roof collapses after the cave cavity has grown too big to support it.
"Kilsby's formed in a similar way hundreds of thousands of years ago, but because we haven't yet found stalactites deep underwater in the sinkholes here, it's impossible to accurately date them," Mr Lewis said.
The South East is a vast flat limestone slab similar to those found in other renowned cave diving destinations like Mexico, Florida in the United States and on the Nullarbor Plain, Mr Lewis said.
"The difference between the American caves and the ones in Mount Gambier and the Nullarbor is they have water flowing through them, while the local ones have still, clear water, making them some of the best places to cave dive in the world," he said.
Mr Lewis was joined by fellow CDAA cave divers and researchers Peter "Puddles" Horne and Mark Nielsen.
"Kilsby's Hole is my favourite laboratory," Mr Lewis said. "I've been a member of the CDAA for 40 years and I always come back to this place."
As far as development of the site is concerned, Mr Kilsby believes a State Government grant would be ideal to make the hole more accessible to a wider audience.
"The natural beauty and unique geology of this place should be shared nationally and internationally as it could become a tourist destination of note for South Australia," he said.

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VALE CAMERON KINNOCH ROY

16th Sep 1987 – 27th Sep 2015

Written by Neville Skinner

On the 27th September, Cameron Roy from the Scouts caving group took his own life following many years of depression. Most, if not all of us, had caved with Cameron and he had become a good friend to all who knew him. He was a caring, genuine, sincere, fun-loving, sharing person who was always ready and keen to teach and assist others. Cameron was a mentor.
Cameron's funeral was attended by 100 or more Scouts in uniform and several FUSSI and CEGSA members. Along with family and numerous other friends, the funeral spilled out of the parlour and into the driveway. The stories of Cameron's achievements and how he had positively impacted other peoples' lives flowed for over an hour. Very few people knew the dark secret inside Cameron, and all wished they could have helped in some way.
Cameron had always loved the great outdoors; even as a child when the family would spend

weekends at their holiday house in Blinman. It was said that when Cameron was older he would drive up to Blinman on a Friday night, sleep the night, and then drive back again the next day. He enjoyed the serenity of these surroundings.

Cameron was well educated – he went to Prince Alfred College as a boy and later to the University of SA. Cameron joined the Cub Scouts in 1997, where he set his eyes on achieving high standards and challenging goals. In the Scouts he became known as Ullr (pronounced "ULL-er"), the Viking male winter god (in Norse mythology) of skiers, snowshoes, hunting, the bow and the shield. He became heavily involved in Rogaining (long distance cross country navigation on foot), Climbing, Caving, Skiing (another of his great loves), Canoeing, Rafting and the like, and in 2007 he started actively pursuing the quest to achieve the Baden-Powell Scout Award.

In Oct 2007, Cameron went with his family to PNG where, at his father's request, he accompanied his then 11-year old brother Callum on a Prince Alfred College trip to walk the 96kms of the Kokoda Track from Kokoda to Owens Corner in 7 days. This he achieved effortlessly.

On 18th Sept 2008, after 18 months as a Joey Leader, Cameron wrote a letter announcing his intention to finish up in that position at the end of that year. In that letter, Cameron said: "the thing in Scouting I am most passionate about is getting out into the great outdoors and climbing those mountains, rambling across the plains and seeing the beautiful views of the world". His pursuit of the Baden-Powell Scout Award took him to places such as the Flinders Ranges (numerous areas), the Snowy Mountains, Morialta Conservation Park, Mt Crawford Forest, Waitpinga cliffs, Mt Arapiles and SW Tasmania (The Mount Anne Circuit), where he ably demonstrated his ability to organise trips and "camp on at least ten separate occasions, aggregating not less than ten nights on at least three different campsites, showing on all occasions a high standard of campcraft." In 2009-2011, Cameron completed a 2-year TAFE course in Outdoor Recreation and Tourism. During that two year period, Cameron said he was away on trips for about 280 days, camping on most of those days.

Cameron wrote in one of his reports that during an expedition to Mt Arapiles in Jan 2011 with two mates they climbed the 100m "front route" of The Pharos, a free-standing rock tower containing three pitches, each rated at Grade 17 (Hard, Very Severe climb), with their dinner, breakfast, water, sleeping gear and bivvy bags, camped the night on the top of the summit, and then abseiled back down in the morning.

Cameron was presented with his BP award on 15th Sept 2013 at the Beaumont Scout Hall. (One previous recipient in 1970 was CEGSA's Wayne Goedecke whose major project was the entire detailed survey of the Sand Cave complex at Naracoorte - one of CEGSA's most outstanding maps - and who also is the only person to have climbed 'The Dome' in Mullamullang Cave on the Nullarbor.) The BP Award is the highest award in the Rover Section, which is the oldest section of Scouting for young men and women aged 18-25. Cameron was the 36th South Australian Rover to receive the award.

Most of all, Cameron proved himself to be an inspiring leader and mentor to both youth and adult members within the Scouting community. As a Scout Rover, Cameron had become a very competent leader in rogaining, skiing, climbing and caving, and it was when the Scouts became involved with joint CEGSA trips that FUSSI got to know Cameron (and other Scout leaders). Cameron was always willing to help people, and to share his knowledge with others. We enjoyed our short time with you Cameron, and we would have liked the opportunity to spend more time with you. Vale Cameron, we miss you.

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Cave Nomenclature

I have some confusion with a couple of caves names.

U106 In the study and report on cave crickets this is labelled as Stinkpot Cave.

U108 In the study and report on cave crickets this is labelled as Locks Cave.

I have a record that this was called Stinkpot Cave by FUSSI in about 1992 due to the presence of a decomposing snake.

Before I enter the names in OzKarst I would like to know what name applies to what cave. If any one can shed any light on this or knows of anyone who can solve the problem please let me know.

Thank you,

Kevin Mott.

FUSSI PROGRAMME February to July 2016

22 - 26th February – O-Week

Wed 24th Feb Fair Day on campus, Club stall - ALL HELP NEEDED

Sat 27th Feb Stakeholder meeting Naracoorte.
Saturday all day.

Sat 27th - 28th Feb. Beginners Trip. Naracoorte or the Lower South East.
All welcome.
Thomas, Clare and Aimee coordinating.

29th Feb - Semester Starts

Sun 6th Mar: Murray River Caves by boat. 9:30am – 6pm
Bring boots, overalls & knee-pads, if you have any.
Clare coordinating.

Thu 17th Mar: Social Meeting. 6-8pm, on campus
Guest Speaker: TBA
A special presentation...

25th Mar – 3rd Apr: Nullarbor Plains caves – the biggest chambers you've ever seen!
An extended Easter trip.
FUSSI exec. coordinating.

MID SEMESTER BREAK: 11th – 26th April

Sat 23rd – 25th Apr: Wooltana Cave (Anzac long weekend)
SRT only. TBC
Subject to cave being open

Thu 28th Apr: Social Meeting. 6-8pm, on campus - TBC
Guest Speaker: Ken Smith
A special presentation "The Caves of France"

Sun 8th May: Corra Lynn Cave
A one day trip to the longest cave in SA. TBC
Thomas coordinating

Thu 12th May: AGM: 6-8pm, Room 250 SSN on campus

Sat 21st – 23rd May: Mairs cave, Clara St. Dora cave and Mt Sims cave,
Southern Flinders Ranges.
A great beginners trip.
Contact: Clare Buswell.

Gloom, Depression, EXAMS: 20th June – 3rd July

MID YEAR BREAK: 4th – 24th July

ALL SUBJECT TO CHANGE

CEGSA members are welcome to attend. Contact Mark Sefton or Neville Skinner.

CALENDAR OF EVENTS

Date	Type of Event	Description	Contact
24/02/16	General Meeting	Royal Society Room, SA Museum, Adel.	Ian Lewis
25/02/16	Caving	Corra Lynn with Mercedes College	Graham Pilkington
27/02/16		Naracoorte, Cave Zoning Workshop	Matt Smith
03/03/16	Caving	Corra Lynn 3D LIDAR Cave surveying test	Ian Lewis
??/03/16	Committee Meeting	TBA	Ian Lewis
12-14/ 03/16	Adelaide Cup W/E		
23/03/16	General Meeting	Royal Society Room, SA Museum, Adel. TBA	Ian Lewis
25-28/ 03/16	Easter W/E	Kangaroo Island	Grant Gartrell
07-26/ 04/16	Caving	Nullarbor. Webb's and Witches Caves surveying.	Graham Pilkington
??/04/16	Committee Meeting	TBA	Ian Lewis
27/04/16	General Meeting	Royal Society Room, SA Museum, Adel. TBA	Ian Lewis
23-25/ 04/16	Anzac Day W/E		
30/04/16	Working Bee	Library and Records	Graham Pilkington
??/05/16	Committee Meeting	TBA	Ian Lewis
11/05/16	CEGSA NEWS	Articles due	Athol Jackson
25/05/16	General Meeting	Royal Society Room, SA Museum, Adel. TBA	Ian Lewis
28/05/16	Working Bee	Library and Records	Graham Pilkington
??/06/16	Committee Meeting	TBA	Ian Lewis
04-06/ 06/16	Queens Birthday W/E		
22/06/16	General Meeting	Royal Society Room, SA Museum, Adel. TBA	Ian Lewis
25/06/16	Working Bee	Library and Records	Graham Pilkington
	Caving	Ongoing Vic Fossil survey	Gary Woodcock
	Caving	Continuing Fleurieu Peninsula Exploration	Grant Gartrell

****Extra trips will be notified in the Calendar on the Website or at General Meetings****

To be covered by insurance it is mandatory that caving trips involving club members must be registered as CEGSA Trips. To do this, the nature and timing of the trip must be entered in the Calendar of events in CEGSA NEWS, minuted at a General Meeting of Members or entered in the Website Calendar. 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.
Also, please ensure that a report of the trip is submitted to the Records Officer in a timely manner.