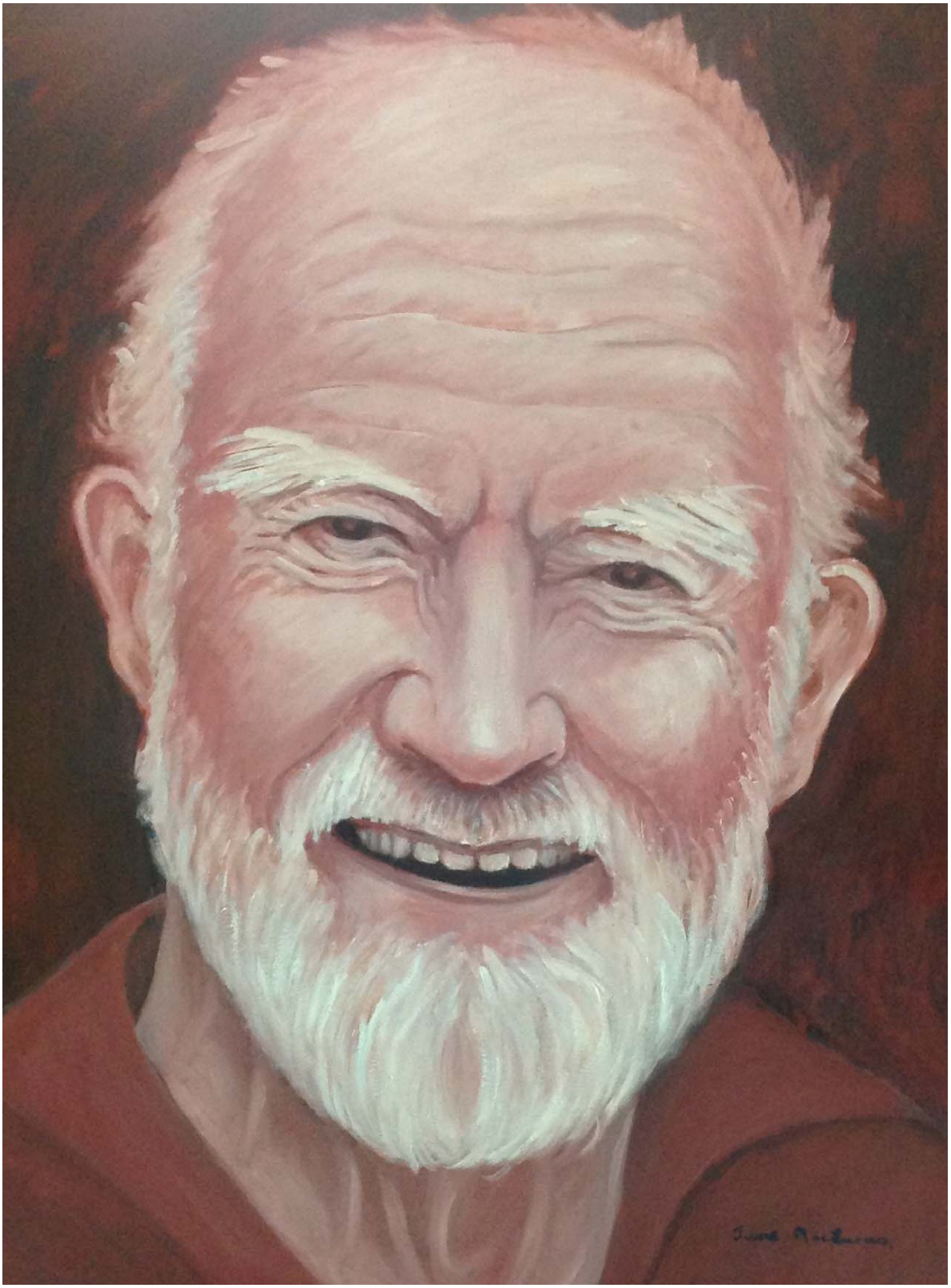
CEGSA NEWS

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

Volume 60 Number 3 **Issue 239** **AUGUST 2015**



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 p40

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Cover Photograph: Elery Hamilton Smith Portrait By June MacLucas.

Photo: Kent Henderson.

CONTENTS

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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 for Volume 60 Number 4 (Issue 240) is Wednesday 11th NOVEMBER 2015. 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 post to 6 Hudson Ave Rostrevor 5073 on a CD, in Word or ASCII text format. Do not embed photos in text; send as separate files with notes where to put photos. Photos are preferred to be in colour (jpg format). Of course other forms of communication will still be gratefully accepted.

PRESIDENTS SPOT

Probably like most cavers, I enjoy looking at cave photos and watching caving films. CEGSA has had its fair share of photographers and many of their photographs have ended up in Records. However, because photographs have always been considered different to other data collected on caves, many cavers have never deposited their photographs into Records. Some cavers are now doing this as their caving career comes to a close. Members need to encourage anyone that they're in contact with to donate any cave-related photographs because we are sure that these valuable images are being tossed into landfill by relatives who do not understand the value of the photographs. One case the stands out as a disaster, are the two tea-chests full of glass slides taken by Capt Thompson's Nullarbor photographer on his death.

Talking about photographs, we've now reached the stage of movies, and even some 3D images, being taken by many cavers. The "Go-Pro" revolution. Movie storage is no longer an issue because a movie fits on a tiny part of a small digital recorder readable by many common household devices and the film doesn't require large rooms and protection from degrading cellulose. CEGSA would be thrilled to archive copies for you, and several of our members have already supplied copies.

We have members with decades of experience in taking stills, but little experience in taking movies with the new mobile cameras. Many years ago, Athol Jackson made a pseudo movie of a traverse through Wombat Cave at Naracoorte. It took several trips and close study of the photos to move small pebbles "back in place" and to adjust the height of the camera to eliminate jerks as the images morphed from one to the next. We need to learn similar techniques all over again. For instance, if the camera is head-mounted, then most cavers swing their head around while moving, especially to see where their feet are about to land. It will also be a problem going through tight tunnels when your head often faces the floor! Maybe in caving we need some mount for the camera that a caver carries and can hand over to someone else at times to maintain a smooth traverse.
Incorporating movies into our maps is another skill that the club needs to acquire. We've done this for stills by printing them onto the map. Electronic maps have had the facility to have linked images since the 1980's but we've never made any like this. Someone needs to push us forward so that we're only 30 years behind.

Graham Pilkington

%%%%%%%%%%%%%%

Caving

We're going down, down
Under the ground, ground
Under the dirty, dirt
To the hot rocks

We're going down, down,
Under the ground, ground,
Under the dirty, dirt
To play and exercise.

We're going down, down,
Under the ground, ground,
Under the dirty, dirt
To explore a new land.

We're going down, down,
Under the ground, ground,
Under the dirty, dirt
With some interesting fossils

We're going down, down,
Under the ground, ground,
Under the dirty, dirt
We'll have to crawl and climb.

We're going down, down,
Under the ground, ground,
Under the dirty, dirt
I had a fantastic time.

By Juliet Pilkington age 11

TRIP REPORTS

FUSSI EYRE PENINSULA TRIP REPORT (Part 2)

Participants: Neville Skinner (Trip Leader), Daniel Dingwall, Tim Featonby & Nicole Baillie
1st-5th Jan 2015
Trip report and photos by Neville Skinner

After that we headed back to the turnoff to the Sinkhole that formed when the road was being constructed in 1970, arriving there at 3pm. The sinkhole is situated right in the middle of the road, enclosed by scrub on one side and fence around the rest of the perimeter. A sign warns that under no circumstances was anyone to enter. Of course we had permission, besides we were not ordinary people, we were cavers.
With the temperature at 40 degrees in the shade, it took extra focus to get motivated. To enter we had to bypass the fence where it met the scrub, wrestle our way through dense scrub for 3m, then drop 1.5m over the edge of the sinkhole onto a small rock, taking care not to fall backwards onto the rock-pile below!
Tim & Daniel headed off first in record time, while Nicole & myself were still putting our overalls on. We had been told there was a small lake at the bottom, so I put my mask and fins in, just in case. As I was putting my helmet on, I realised that Tim had left his helmet behind. Better take that with me, I thought...
As I reached for mask & fins, I noticed Tim had also left his mask behind. Blast, they'll be waiting for us inside the entrance… we better hurry, I thought.
With Tim's helmet in hand, and camera and masks contained therein, we raced off… over the fence, through the scrub, fell over the lip of the sinkhole, then corkscrewed down through the entrance restriction onto the sand below. They were nowhere to be seen. We visually checked the entrance area for stability, and the way on. I was surprised that we could not even hear Tim & Dan. They must be well ahead of us, I thought.

We negotiated the rockpile in a clockwise direction, following the trail left by flowing water marks in the sand from previous downpours. Once on the other side of the rockpile, the water trail disappeared and was replaced by a wall. At this point I could hear the muffled sounds of rocks being moved ahead of us and thought Tim & Dan must be about 20m in front of us. We could have continued to follow the rockpile around but that would have brought us back to the entrance, so I climbed up the wall, located the lead that continued, and called back to Nicole to follow. Another 5m and we came to another junction. I asked Nicole to wait and followed each lead until I met the end of the false leads, so we continued down the remaining lead until we came to the next junction, when we repeated the process. At one stage I stuck my head into an original section of decorated cave and decided we would check that out on the way back. We continued thus until we eventually pushed through a hole and saw the end in front of us, with a small lake on each side. I then realised there was an easier way to enter this last section if we went a bit to the right, so I put that into my memory bank. There was no sign of the other two.

I thought they must have taken the wrong route and are probably waiting for us back at the car. Then Nicole suggested they may have found an alternate route that went to another, possibly larger, lake in the other side of the rockpile that we had missed. B@#%^^$s, I thought, that'd be right!

Well, we're here now so we might as well enjoy. "Look the other way Nicole" I exclaimed, as the overalls and jocks came off and the bathers went on. I carefully picked my way in so I would not disturb the silt too much and went for a swim and look around. The floor of the lake was covered with a heavy layer of black clay, so this was best left alone. After a cool down swim and a few pictures, I put my overalls back on and we headed back to the old section of cave I had seen on the way in.

The decorations reminded me of Mairs and Clara St Dora caves in the Lower Flinders Ranges. There was a cluster of stalactites, straws, popcorn and a wonderful small section of shelfstone. We gazed on this for 10-15 minutes before heading out.

When we reached the surface it was still 40 degrees and I realised that I was a little dehydrated so I headed for the vehicle to rehydrate. And there was Tim & Dan, both looking lonely and bored. They looked at us and asked "Where have you been?" What sort of question was that, I wondered.
I explained we had been caving, found a pool, I took a swim, looked at some cave decorations and generally enjoyed ourselves. They both laughed in disbelief and repeated the question. Despite our best efforts, they would not believe either of us, so I pulled the camera out and flicked through a few recent photos.
I have never seen such a rapid change in attitude from anyone before, and it quickly became evident that I was going back into the cave for another trip, or I was going to die. I opted for another trip in, while Nicole opted to stay behind with Will (der beast).
To my surprise I found I still had some difficulty in finding the way back in, probably because of all the zig-zagging I did on the first trip in. Once in the lake area, Tim & Dan wasted no time in hitting the water and cooling down.

On the way out we stopped in at the old decorated section, where Tim spent some time studying the different types of formations.

It was after 6pm when we left Whalers Way after letting the access staff, who lived in a caravan adjacent to the gate, know that everything went well and we were heading home. In fact, we still had two hours driving to do before we arrived at our accommodation, and we had not eaten. So we headed back to Pt Lincoln, where we grabbed some fish & chips from "King Neptunes Seafood &

Pasta", then hit the road. En-route we rang ahead and informed the Sheringa caravan park that we were behind schedule and would not be arriving until after 8:30pm.

We arrived at Sheridan Caravan Park about 9pm, and that was when we realised it was also the Sheridan General Store, the Sheridan pub & bottle shop and the Sheridan Inn restaurant. A few young locals were drinking at the bar, and one was overcome with awe when he saw my FUSSI tee-shirt bearing the words "Flinders University", preceding the words Speleological Society; this had him thinking I must be a professor. He sat and watched me in awe for some minutes before getting the courage to ask me how long I had taught at the University. It took me some time to explain to him that I didn't work there and that we were just cavers, but I think he smelled a rat and sensed we were working under cover.
A sign adjacent to the bar said "Trespassers will be shot; Survivors will be shot again". We got the point. Once we had introduced ourselves to the bar manager, proprietor, security officer, caretaker and grounds-keeper, had a quick visual security check run over us and passed a 10-minute interview, we were directed to drive back down the road about 25m, through a farm gate and down a dirt driveway, where we would find a van with its lights on, near the trees.
It was a little unsettling when we turned the last corner to be confronted with a yard full of unused rusting car wrecks. Were these the vehicles of those poor souls who never escaped? An image of John Jarratt flashed before my eyes, just as I heard Tim mutter those prophetic words… Wolf Creek. Surely this must be… No Where Else.

The rear of the Sheringa Caravan Park

The front of the Sheringa bar and entrance to the Sheringa Inn

Dan had arranged our accommodation here, and had warned me it was really cheap and not to expect 5-star, but nothing had prepared us for this. Had Dan inadvertently led us into a trap? I decided with Tim sleeping between myself and the door, Dan & I would be okay. Tim was probably thinking "Who dares, Wins".
Our van had torn flyscreens and could not have been cleaned for some years. So we set to work sweeping the floors and cleaning the kitchenette. I took the dead mouse out from under Dan's bed, and worried what might slither into my sleeping bag overnight. The next morning we awoke early, but relieved; we had survived. I pulled the curtain aside on my window and found myself looking at a burial plot at the base of the tree outside.

The view out my window, with place of rest at base of tree

Sheringa Caravan Park – caretakers residence

After having breakfast and settling our account ($30) for the van, we departed quickly, but discretely. Best not to draw attention to ourselves, I thought, just put some distance between us.

Our next stop was the Lake Hamilton Station homestead just down the road, where we sought permission from owner Mr Nosworthy to enter Homestead cave. Daniel had already done the initial legwork on this, but nevertheless we waited patiently for 40 mins in the vehicle while final negotiations took place; such things cannot be rushed. Dan reported that Mr Nosworthy was pleased to see us, and remembered CEGSA members Ian Lewis & Graham Pilkington from previous trips.

The entrance was a 1.5m hole in the ground, dropping down into the first low chamber, but when I looked for a cave number/tag, I could not find one. After entering we checked out other possible leads before heading down the tunnel with air flowing out of it, which took us into a low restriction for about 4m, where we entered a second chamber. This would have once been a stunning chamber, but sadly over the years has had all its stalactites broken off at ceiling level, presumably by souvenir hunters.

Entrance to Homestead cave E1

First chamber in Homestead cave

Second chamber in Homestead Cave

Noting a secondary route against the right hand wall, we took the main route down the left side of the second chamber that took into another area a bit lower down that then led into a third area. This last area was where we met water, albeit shallow water, but this area had short active stalactites that had extended to meet the water, and the reflections were quite pretty. Sadly I didn't have sufficient light on me to light this area up for good photos, but I will address this next time I head over at Easter.

Third area in Homestead Cave E1 – the lake section

I immediately regretted not having donned wetsuit & bathers, but did not feel like crawling back out to change. Tim was keen to head off for a look around the corner, so I gave approval as long as he kept to the right-hand wall away from the lake area, which already had footprints all through the mud from previous visitors, possibly the same people that broke the stalactites off in the previous chamber. So Tim stripped off to his boxers, donned a mask and slithered through the mud, like a US marine in a Hollywood movie. We watched as he slowly disappeared behind the stalactite curtain, until no light could be seen. While he was gone we talked and I played with trying to get some good photos of reflections on the water, but the headlamps were not enough to capture the moment. Some 40-50 minutes later Tim returned, and reported there was much more to see, most of it undamaged because it was not easily accessible to the public. He said this was some of the best caving he had ever done, but it would have been better if we had a map. Sadly I had no idea if a map existed for the cave, so I undertook to find out if there was and to obtain a copy, if possible.

The lake section, Homestead Cave

Tim returning from a reconnaissance mission

After we exited and put our gear away, we did a quick check of the surrounding area by foot, looking for any other possible cave entrances, before heading back to the homestead to thank Mr Nosworthy for allowing us to explore his cave. He told us there was another cave “about 2-3 kms” down the road, close to the fence, and a few others that he could not remember where, but we were welcome to look.

So we headed south for a few kilometres and after some 30 mins or so, Tim spotted the said entrance about 10m in from the road. Tim keenly jumped in and checked it out, but it wasn’t very deep and didn’t have any obvious leads. (I now believe this is cave E78.) Tim then suggested that since this was clearly a good area for caves, we should separate and walk across the paddock looking for more caves, while Dan drove the vehicle to keep pace with us.

After 50m of walking I decided we were probably too close to each other so I moved another 100m away from the road, when an adjacent hill caught my attention. I wandered over to it and literally within a minute spotted a cave entrance, which looked very promising. I called to the others and as they were approaching I looked over the other side of the hill and spotted a doline about 30 m away with another cave entrance.

Entrance to cave E6

Entrance to cave E7

Neither of these caves had been identified with cave markers near their entrances, so we were excited at finding two new caves. (On returning to Adelaide I learnt from CEGSA that these were probably two known caves, E6 and E7.) By now it was 2:45pm and we had not eaten, so we decided the exploration of these two caves could wait until Easter time.

After a short discussion, we decided to drive the 20kms or so to Elliston for lunch, as we were not keen to try the Sheringa Inn restaurant - no point pushing our luck… So we headed off to Elliston, where we found facilities to be a little more basic than expected – clearly we wouldn't get a pub meal at 3pm, so it had to be the local service station. From the outside that wasn't even appealing, but we were surprised to find the food & service was good. A young couple with two small children ran the place and they looked after us.
After lunch and an ice-cream each, we went to the Elliston Caravan Park to see if they had any cabins available, but found they had no remaining accommodation at all, so we opted for a patch of green grass on the hill instead, to throw our sleeping bags on. For this we paid $45. Talk about highway robbery!

Point Wellington cliffs

Remnants of old cave at top of the cliffs

About 4pm we went for a drive to the local Point Wellington, to check out the scenery. We then decided to follow the scenic drive to the end, coming back the same way. By sheer luck, I noticed a "lantern" hanging off the top edge of the cliffs, but only for a few seconds as we drove past at 30kph. However, on the way back I asked Tim to pull over so I could check this strange object out that I had seen on the way in. It did not take long to find it, as I had noted the precise area where I saw it, and I quickly grabbed a snapshot as the doubters were making suggestions about what it might have been that I imagined I had seen.
In fact it was the remains of a large "lantern", surrounded by what appears to be many large helictites, evidence of a decorated cave at the top of what are now cliffs. I could not but wonder how deep the cave had been below the ground level when it was formed; now it is on the surface, 50m above the ocean.

We then headed back to the Sheringa area, where we had heard there was another cave near the side of the road. In fact we found it 30mins after we had left Pt Wellington. It looked quite deep, with an oblong shaped entrance, partially blocked by rocks, and dropping down about 8m into a chamber. We were all excited, out came the wire ladder and Tim could not be restrained. We secured the ladder to the rocks using the trace and down he went to check it out. Okay, I exaggerate, we were tired and I was too lazy to climb down; besides, someone had to remain on the surface in case of an accident.
Tim reported back that the floor of the cave was about 8m across, with about a 0.5m solution tube going down about 1.5m in the corner, too small for Tim to enter and did not appear to go anywhere. I have since identified it from the map that Tim drew on the day, as cave E58.

Entrance to cave E58

Impressive roadside ravine in the Bramfield area

After leaving E58, we continued south looking for more caves until we came across a large ravine next to the road that had caught my eye when we drove past it on the way to Elliston. This was an impressive ravine caused by water erosion, about 300m long, something like 40-50m wide and about 30-40m deep in the middle, with 2 or 3 smaller tributaries entering from the sides. In it we found huge boulders had been worn smooth while other boulders had been washed down the hill… but where had the water gone when it hit the flats? We searched but never found the answer. Nevertheless it was a very enjoyable walk. The ravine was quite pretty and had several kangaroos within its area, sheltering under trees from the hot sun. I did, however, technically find one small cave, but at 25mm across, there was little to explore.

We walked through most of the ravine, with Tim continuing down the hill into the flats below to find out where the water runs to. When the others were ready to leave, I went for a walk from the car to a vantage point where I would be able to see where Tim was below me. On the way I crossed an old section of road that had several rocks along the inside edge of it, and it was on one of these rocks that I discovered an old piece of steel that resembled part of a brake off an old bullock wagon or horse carriage. After inspecting it, I put it back where I found it, and noted that Tim was about 400m ahead before returning to the vehicle.

World's smallest cave; 25mm wide entrance

Once we had picked Tim up, we headed back toward Elliston, stopping at the "Nationdale Bush Camping" site, about 2 km up a dirt track on private property. This turned out to be an old limestone quarry and crushing plant. The sign on the gate says "camping by Donation" and there is a phone number to call Darren on 0408 916 216 if you want to stay there. Presumably this is so he can arrange water. Facilities were basic – a portable toilet in the bottom of the quarry, an empty concrete-lined stone tank built in about the 1930's (I guess), and an old windmill straddling a hand-dug well. The well caught my attention – it was beautifully lined with bricks and had water in the bottom. It did cross my mind that it might be worth checking out with SCUBA at some stage.

By now it was late and we headed back to Elliston, arriving there around 7pm. As none of us wished to miss out on dinner, we drove straight to the hotel as we were, including Will der Beast.

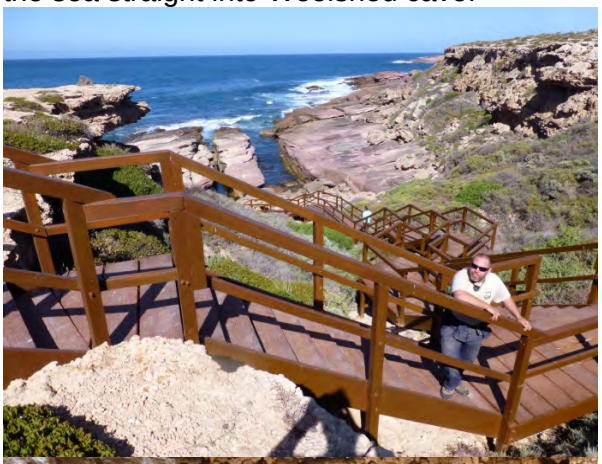
After dinner we returned to the caravan park to set up our salubrious lodgings, had showers and went to bed under the moon.

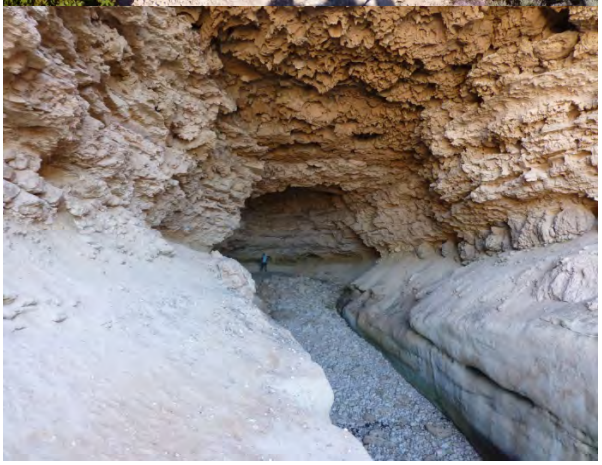
Sunset over Elliston caravan park

Our salubrious lodgings, with safety gear close at hand

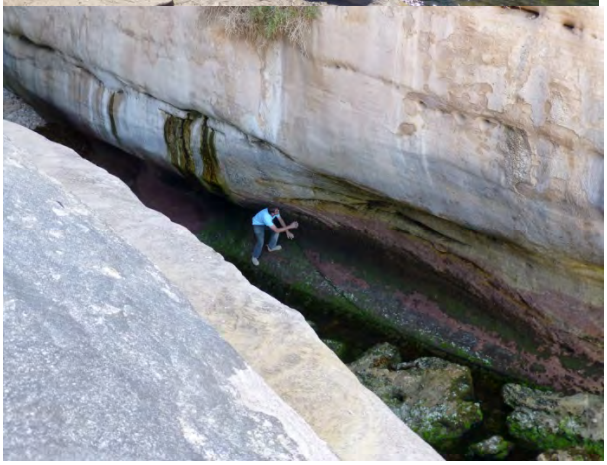
The next morning we departed Elliston at around 7am, and headed off to see Talia Caves, about 40km north of Elliston. On the way we swung by Walkers Rocks, a great beach that you can drive onto (4WD only). At the end of the gravel road there is a small camping ground with a council sign that says free camping. There were 2-3 caravans there at the time availing themselves of the offer. From memory there was also a portable toilet.

The turnoff to Talia Caves is about 6kms north of Talia, where you turn left and head toward the sea, along Talia Caves Road. We arrived at the coast at 10am, and went straight to Woolshed Cave, which "represents a weakened joint in the sandstone along which the destructive action of the waves has been most effective", according to the sign.
One walks down a wonderful flight of stained timber steps, onto a large rock slab below. At one end of this slab the waves break over the rock, where the resultant whirlpools have formed deep holes in the rock, with various aquatic plants growing therein. Adjacent to this is a crevasse, which leads from the sea straight into Woolshed cave.





Dan against the rear wall of Woolshed Cave



Dan returning from the cave via the alternate route

Leaving Woolshed Cave just after 10:30am, we arrived at the Tub some 6 minutes later.
According to its sign, “In the case of the Tub, the thin layer of much younger limestone composing the roof has been eroded to such an extent that the roof has collapsed. The caves original entrance is still covered and the collapsed ceiling has formed a rough bowl, 60 to 70 feet deep.”

Tim investigating the Tub

The cave’s sea entrance is about 2m high

On leaving the Tub, we searched for another feature shown on Tim’s GPS map (from memory), which was about 100m south, but it appeared to have suffered a collapse. However, I did find a rock nearby containing a good example of fossilised roots.

The access ladder and handrails, into and out of the Tub

The scenery 150m south of the Tub

Fossilised tree roots 100m south of the Tub

When we left the Talia caves area, we headed about 14km further north to Venus Bay, where we stopped for lunch. This is a lovely quiet place to visit and frequented primarily by grey nomads and fisherpersons.
We then went a further 30-35km north to Murphys Haystacks, which is a paddock full of unusual granite rock formations called Inselbergs. We arrived there at 1:30pm, and left at 2pm. I have not included photos of this part of the trip, as I have already exceeded my data allowance for this article.
We then returned to Cleve via Port Kenny, Wudinna, Kyancutta and Lock, arriving back just in time to head out for dinner. We had promised to take Daniel, his wife Lasma and their two children out to dinner at the local Cleve Hotel. We barely had enough time to clean ourselves up and present to the Hotel before 8pm, and barely 5 minutes before the food stopped being served, much to the disgust of the proprietor who made no attempt to disguise his displeasure.

The next morning Tim, Nicole & I headed for Cowell to check out the Jade Factory before heading up to Kimba, where I left my car while we took a very busy half-day trip to the Gawler Ranges. Sadly we arrived back at Kimba at 9pm to find the pub closing, so the hot meal we had been dreaming of the last 4 hours was not to be.

What I would like to say, for the benefit of all those cavers, both wet and dry, that head through this area en-route to the Nullarbor, is that Kimba hosts a magnificent “FREE” camping ground, adjacent to their showgrounds. They do, however, have a secure money box mounted conspicuously on the toilet block wall, with a note asking for donations to cover the cost of maintenance of the facilities. And they do ask campers to clean the shower room after use. I was happy to donate $5 for this magnificent gesture from the Kimba council.

Donation-only campground at Kimba

With modern showers and toilet block

The next day we had a very hot trip back to Adelaide, arriving tired & thirsty. Given that during the time we were away Adelaide had suffered a severe heat wave and the worst bushfires recorded for some years, we were pleased we had chosen to be on Eyre Peninsula, doing what we love.

Many thanks to Dan for organising the sites, for landowner liaison, for using his vehicle for most of the trip, for allowing us to camp in his man-cave for several nights, and for making the trip possible. Thanks also to Tim & Nicole for coming, and for their input and help in locating and exploring these caves.
And finally, a BIG thanks to those landowners who allowed us to enter their properties and enjoy their facilities.

Neville Skinner.

Blue Creek Cave Diving - Trip Report January 2015

Richard “Harry” Harris (CEGSA)

Background

Reports of a positive dye trace from Bulmer cave to Blue Creek Resurgence piqued the interest of the Wetmules, and a plan was made for a visit in early 2015 (and a year off from the Pearse Resurgence exploration).

The Blue Creek cave and the nearby resurgence have a long history of exploration. Most recently, I am aware of dives in the resurgence by David Apperley and Rick Stanton in 2007 using sidemount techniques. Rick felt that the possibility of major finds were low, and commented that the sand flies were of epic proportions at Courthouse Flat campground! Over the last few years Australian and New Zealand members of the Global Underwater Explorers (GUE) have performed numerous expeditions to the site, both for purposes of training and exploration. No major new finds have evolved from these trips but survey work has progressed well.

Tom Crisp is a local cave diver who has worked with the GUE teams, and provided major logistic and practical assistance to the Wetmules trip. Although not seen by himself, Tom understood that a side mount restriction off the main passage held promise of new passage and this was to be the main focus of our trip. As the GUE divers utilised backmount techniques, there was a definite possibility that side mount divers may be able to push into new cave that precluded these divers. In addition, the ability to do more prolonged dives using closed circuit rebreathers meant that the Wetmules would be able to spend more time searching for new leads.

Tom Crisp and Stefan Parsons: Local cave diver Tom Crisp (L) provided invaluable local knowledge and support.

The Wetmules L-R: Richard Harris, Sandy Varin, Craig Challen, Luke Nelson, Ken Smith, John Dalla-Zuanna and Dave Bardi.

The team included our regular suspects: Ken Smith (CEGSA), John Dalla-Zuanna (VSA), Sandy Varin (VSA), Dave Bardi (VSA), Craig Challen (CEGWA), Luke Nelson (CEGWA) and Richard Harris (CEGSA). As always, the Nelson Speleological Group and in particular our wonderful hosts Oz Patterson and Deb Cade gave us enormous assistance in NZ. We were joined at the cave by divers Tom Crisp and his buddy Stefan Parsons from Auckland, and also enjoyed a visit from Martyn Farr (Wales) who is doing some amazing exploration in the Takaka Valley.

The Expedition

Four pallets of diving and camping equipment were shipped from Australia in December and the Mules arrived in Nelson on January 10th 2015. A BBQ with our hosts Oz and Deb gave us the strength to prepare for 2 weeks camping at Courthouse Flat starting the next day. Sollies transport was employed to ferry all the gear to the camp, and a hired van to transport us. Under two hours drive got us to the camp via some beautiful local scenery, trout filled rivers and Mt Owen looming in the distance. Freshly mown grass and a long-drop toilet made for a very comfortable site, although we missed the adventure of a helicopter drop!

Courthouse Flat provided a perfect campsite, complete with Portaloo! But sadly the sandflies offset many of the benefits.

All things come at a price! The blessing of the camp amenities was slightly offset by the daily 1.7km stroll to the cave entrance. This is where the rebreathers again proved their worth as once all the gear was ferried to the cave; only the consumables needed to be taken back to the camp each day (small oxygen cylinders, CO2 scrubber and batteries). Still, it was good exercise and beautiful walking in the mostly excellent weather.

A beautiful walk to the cave entrance, made easier with the use of trolleys for all the heavy gear.

Diving at Blue Creek is pretty easy. The main resurgence is an overflow for the cave system that only flows in very wet conditions. All the water appears from a bit further downstream so the entrance pool where diving commences is still and therefore pretty silty. A bit of boulder hopping delivers you onto a small beach where two divers can comfortably gear up. Water temperature is slightly warmer than the Pearce at about 7-8 degrees, although at depth (in the slowly flowing water) it is closer to 6C.

The Diving

Over the course of the next 11 days the team performed approx. 70 dives total in the system with a max depth of 77m and max dive duration of around 3 hours. A collapsible habitat was installed at 6m depth although for dives of < 90 minutes it was not required. With the exception of two divers (KS and LN) dives were performed on closed circuit trimix, with the team utilizing either Flex or SF2 sidemount rebreathers.

Tape measures were run throughout the main passage from the entrance to the cave terminus with a total linear distance of 256m. This baseline was used for much of the subsequent survey and supplemented with some sketches in the side tunnels.

Craig Challen about to slide down between the boulders into the cave. Below him is the small beach where the divers gear up.

The electronic cave logger mounted on a scooter was used to complete circuits in the A,B and C tunnels. A “pinger” point and dye tracing were utilised to establish the connection between the cave passage and the main outflow under a surface rock (apparently known as “Mike’s Rear Entrance”). A physical connection from above and below could not be made, as it appears to be a boulder-choked chimney.

Sandy Varin observes the fluorescein dye emerging from “Mike’s Rear Entrance”. Ken Smith is releasing the dye from about 12m depth.

After releasing the dye and positioning a “pinger”, Ken performs a radiolocation to confirm its position.

At a point 188m into the cave (depth 65m) a restricted tunnel entrance was seen on the right side entering the cave. A “T” was formed off the main line and the tunnel explored for 20m to its terminus. The floor was scoured and rocky and appeared to have low flow in the recent very dry conditions. No line was present in the passage. At the end of the tunnel (70m depth) two large boulders blocked the way on, although tunnel was seen beyond. On the left on the floor, a very tight hole led into further passage with definite flow emanating from it. Moving a few rocks led us to believe that exploration might be possible. Over the next 5 dives, the entrance floor was excavated by Challen and Harris until the author could wriggle backwards into the hole with one cylinder removed. Reversing down the passage for several body lengths Harry could then turn around, replace the cylinder and swim forwards. The tunnel curved down and left to a depth or 77m until it pinched out with a small, solid and un-passable lead to the right. Another branching tunnel in this section was explored to the side leading up a rocky slope. Further potential exploration is possible here although a fair bit of rock will need to be moved to progress, however this seems to be the most promising lead in the cave remaining. A view of the boulders blocking the end of the sidemount tunnel was gained from behind, and Harry and Craig briefly entertained a “deadman’s handshake” through the small gap (readers of The Darkness Beckons by Martyn Farr will understand this reference!) but both quickly thought better of it! The system was named “Patience Tunnel” after a local creek and the determination of the team to make this small breakthrough.

The author pauses at the end of Patience Tunnel. To his left, the floor restriction which was the subject of the dig. Ahead of him, the boulder choke where he and Craig considered the “deadman’s handshake”!

Richard Harris head down and trying the restriction on for size.

After numerous dives working on the restriction, it is finally passable.

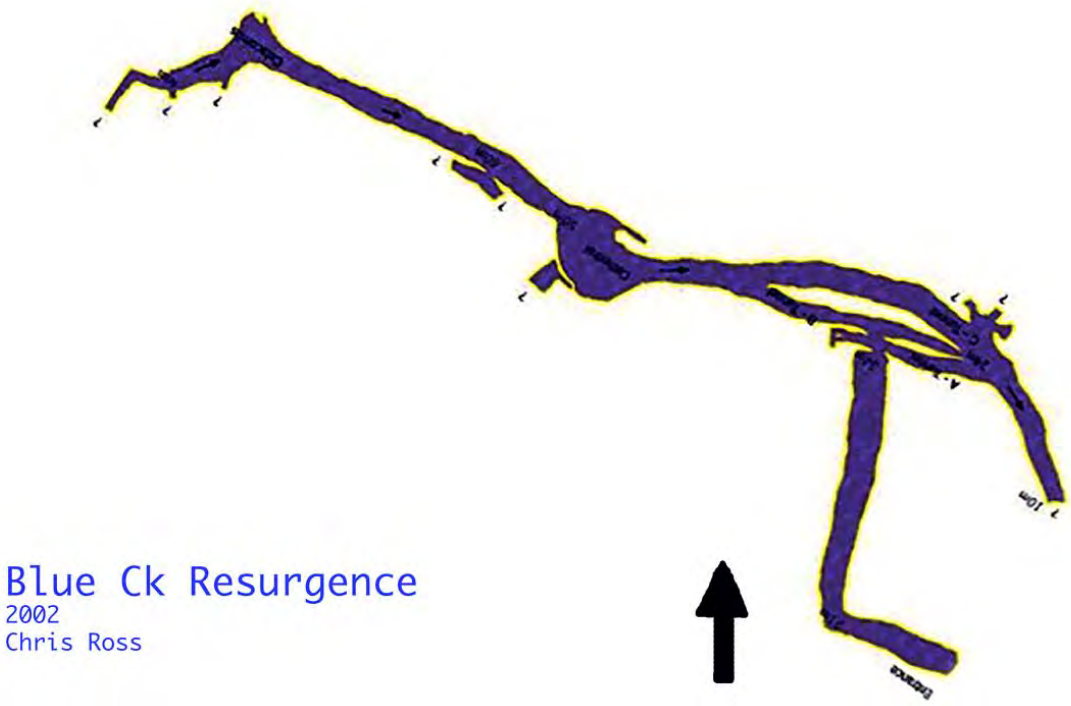
Garbage collection…bundles of old line removed from the cave.

During the cleanup dives a large amount of old line of many different types was removed from the cave. A new orange line was installed although there is no guarantee this will survive the winter floods.

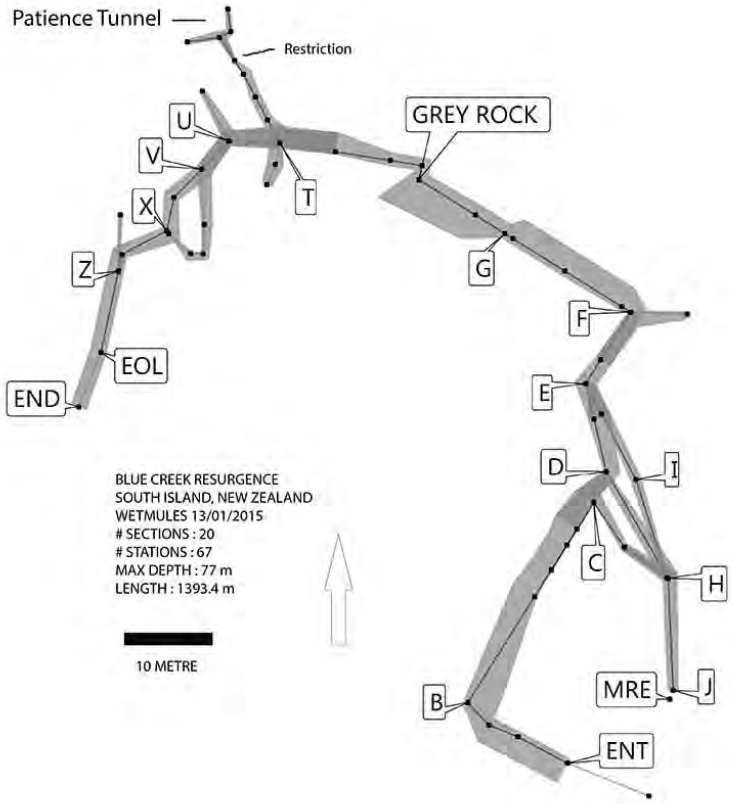
The trip finished on a slightly low point when one of the divers developed neurological decompression illness on the second to last diving day. Unable to self-rescue from the entrance initially, local cave SAR and police were notified and activated. Fortunately by the time help arrived, we managed to get the diver out of the cave and over the next 1-2 hours all symptoms resolved with effective first aid. The team is extremely grateful to the local volunteers and SAR personnel who responded so quickly.

The Map

The new maps are shown below including an enlarged sketch of the Patience Tunnel. The combination of tape measure, compass and knots, electronic logger and dye tracing provided a lot of information however only the main passage survey could be considered of a high grade. It is interesting to see that like the Pearse Resurgence, the main tunnel lies under the river above.



Original Map.



The 2002 map produced by the GUE divers, can be compared with the newer map from our expedition. The main changes are in the overall shape of the cave rather than the length.

Conclusion

The gala dinner in Nelson was more than sufficient to make up for any indiscretions and all enjoyed the local ales. The trip was a success in that a more accurate map of the cave was produced, the efficacy of sidemount rebreathers in this environment was proven and small gains were made in the exploration of the site. The surface outflow connection was definitively linked to one of the cave passages, and the bond between Aussie and NZ cave divers was further strengthened. We look forward to working with the kiwi cavers again next year back in the Pearse!

Richard "Harry" Harris.

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Eyre Peninsular, 3-5th April 2015

Participants: Graham Pilkington, Neville Skinner, Aimee Leong and about 15 FUSSI members.

This was an Easter trip led by FUSSI. Neville (as a FUSSI member) did most of the organization for the field trips while Clare Buswell organized logistics. Neville has already presented a report for this trip but I'm adding a few more photographs.

For a long while, CEGSA members have been interested in the sea caves along the Nullarbor and have recently discovered that the cliffs just south of Adelaide also contain many caves. Well it turns out that there are also many significant caves along the west coast of Eyre Peninsula.

Sea stack with caves offshore from E60.

Sea Cave just west of E4.

Pitting on rise to west of E2.

We've known about those near Talia from the 50's but no-one appears to have systematically explored for more. I've included a photo of one such cave less than a kilometre west of the E-2, E-4, and E-5 cave cluster.

When visiting Homestead Cave (E-1), I noticed a rubbish-cluttered depression 40m SE. In appearance it's similar to that of E-1 without a window into a cave. There's highly likely to be a cave here but with the entrance filled with dirt. No new rubbish is present and the rubbish is not extensive hence I asked the farmer if we could have his permission to excavate this depression. He was encouraging about the proposition and not only gave his permission but offered us accommodation in his shearers' quarters while tackling it. **I'm looking for volunteers to help with this.** Homestead Cave does not head in the direction of the depression hence we have the possibility of a parallel system of the same quality.

Graham Pilkington

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Nullarbor, 6-18th April 2015

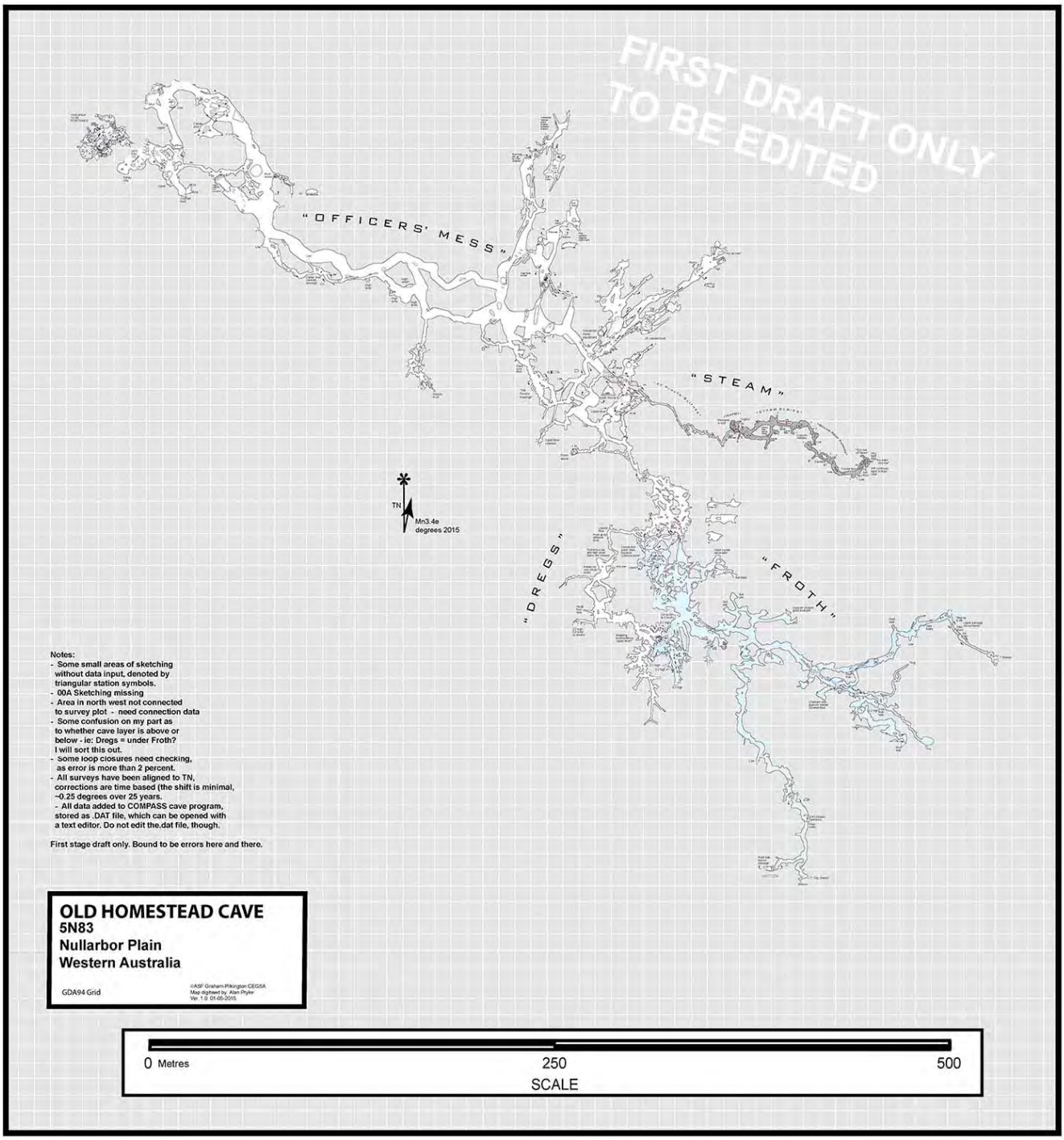
Participants: Graham Pilkington, Ann-Marie Meredith (WASG), Alan Pryke (SUSS), and Katie Keophilaphet (SUSS).

I travelled out to the Nullarbor directly from the trip at Easter with FUSSI to Eyre Peninsula. After confirming the location of N-1005 near Koonalda and walking around unsuccessfully to locate a Quartermaine-Wheeler feature, N-1006, never seen by CEGSA, I travelled on to Old Homestead Cave.

On the first day underground I took everyone for a 2km hike north past the *China Shop*. This was for Alan and Katie to get an idea of what OHC was like before inviting them to survey small tight stuff. Next day we left Ann-Marie at the hut and went to the *T-Pot* at the south end of the *Officers Mess*. This chamber was entered a decade ago by me and two Brits when we discovered the *Spout* and an area of low tunnels heading east. Those two went back a year later and surveyed past the *Spout* but after many years of requests for the survey data, I decided to simply ignore whatever they had purported to do and survey it again. Well, for Alan and Katie to survey it because it took me 10 minutes getting through the *Spout*. By the end of the trip, 170m of passage was surveyed ending in an impassable area 100m due east of the *T-Pot*. Some side tunnels were not surveyed including one that was still going after 20m. Several areas had displays of gypsum needles of over 500mm long. The area past the *Spout* has been named *Steam* and the end is where it has run out of steam.

Alan and Katie also surveyed over 100m in the *Mickey Mouse Holes* to extend them to 250m from the main drag. They also surveyed a couple of hundred metres of passages south along the *Spring Series* from the entrance to the *Mickey Mouse Holes*. This was to clean up a survey by Narrabundah College done in 1986 that left walls unsurveyed with the comment "maze area". It was a chance for

Alan and Katie to survey large tunnels for a change as well as for me to assess the quality of the untrained school children's mapping – mostly OK but occasionally lacking in accuracy or completion.



Old Homestead Cave Officers Mess 5.5 Digital Map.
Produced by Alan Pryke.

Ann-Marie and Graham in the Officers Mess.
Photo: Alan Pryke.

Ann-Marie suffered a bit during the trip from a bad knee hence was only involved in one survey trip when she went with me to survey upper levels along the Officers Mess. We completed the area to the north off the top of the first rockpile chamber along the *Officers Mess* – not much there but it was an interesting climb up. We also continued the survey of the upper area a couple of hundred metres along the *Officers Mess* where the tube splits into three before re-joining later.

One day we all travelled down to doline N-4321 that has a breathing hole partially dug into by Ann-Marie and me a couple of years ago. After a full days work, the hole was a cave 8m deep and still going down. Lack of time prevented access into the next chamber because Ann-Marie was concerned about travelling along the bush tracks in the dark.

Alan and Katie digging out N-5672 in typical Nullarbor landscape.

Two days were spent on the surface 10km to the NE of OHC to check out some NXK features. The area had already been looked over by Ray Gibbons and Peter Ackroyd who had allocated numbers to several features. We added to the descriptions and photographs of N-5672 to N-5674 and possibly other numbered features. Twelve features were documented in all. N-5672 was an unusual blowhole that looked to have cave potential hence we dug into it but was stopped by impassable rock at 4m depth. NXG-35 was an extended depression encompassing several features including a blowhole (s5) buried under a soil then rock layer.

NXG-35 @045f7.

NXG-35s5 entrance in soil.

On the day before packing to leave OHC, we got a good shower of rain. Next day, the others left in their 4WD but I decided to wait for the track to start drying out – I only had a 2WD station-wagon. It was a good job that I did because many times on the way out a day later I had to detour around flooded sections of track. In most cases, I followed the detour "pioneered" by Ann-Marie but had to adjust these for my much lower clearance. That night it really rained – I had just left in time.

Whilst in the hut planning the surveys into OHC, Alan noted that I was restricted to paper plans cobbled together from bits of survey drawings. He offered to compile a digital map for me, a job that I've been putting off for decades. I handed over tabulated data from the inner parts of the Officers Mess and within a week he sent me a Compass map that I was seen with on a TV news segment a few weeks later. I'm in the process of compiling all the OHC data so that a complete digital map can be produced.

Graham Pilkington

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Nullarbor Expedition 2015

From Saturday 18th April to Sunday 17th May (30 days)
Our permits this year were to camp east of Fisher Road, North of number 5 bore depending on suitable area for ultralite plane landing area. Two permits were required. One for the wilderness declaration and one for Native Title determination. Also required was the usual minimal impact with walking groups or motor bikes only to travel off any existing tracks. No cars to leave designated tracks. The ultralite plane to fly grid pattern over designated area.

- Trip Personal: CEGSA – George & June MacLucas
- VSA Victoria: Daryl Carr, Margaret James, Nick & Sue White, Greg Leader, Ken Boland, Hank Coppus, Myrella Bakker.
- Orange NSW: Dennis Marsh, Ian Curtis.
- Kempsey NSW: John Taylor.
- Northern Caveneers, Tasmania: Henry Shannon.
- Visitors for three days early in trip: Indigenous Mirning Elders, Clem Lawrie, Dorcus Miller and driver Nathan Williams.
  Later visitors for two days: Policy and Planning Officer Far West Coast SA from Protected Areas Unit: Sarus Kumar from Adelaide, her driver Graeme Armstrong from Ceduna. Brett Dalzell ex Park Ranger now with Iluka Mineral Sand Mine from Ceduna, who left after 3 days.

Back Row: Ken, Marg, Dennis, Sue, Myrella, Dorcus, George, Ian, John, Greg and Nathan.
Front Row: Hank, Daryl, Glem, Nick, June and Henry.

I found of interest was that the mineral sands are trucked to Thevenard (Port of Ceduna) and then shipped to Geralton WA. Some of the minerals processed from the sands are Zircon, Rutile, Ilmenite, Titanium Oxide.

History of these expeditions

These type of trips with ultralite plane started in the year 2000 at Homestead Cave WA.
There has been a nucleus of members with a few different trip members over the following years. The year 2002 was the finding of the full skeletal Thylacoleo (Marsupial Lion). For the future following trips this was to be beneficial as dating costs for carbon or radio active dating was put on order if universities needed it for research.
At different times there has been requests for specimens of stalagmite or flow stone. Other requests for different areas has been to collect scats from Owls to check on what they have been eating. Another request in different areas has been how many active Wombat digs.
Over the years we have had mice plagues; rained in; windstorms; fox scavengers; and usually dingoes out in the field. Occasionally Bustards are sited, Kangaroos in WA but not our areas of camping SA. Camels usually but not this year due to culling.
The main item is that our data collected is added to the understanding of cast process on the Nullarbor and finding that the features are not just occurring in random but are in particular places

because of past climates (sea levels). Deeper caves south, small blow holes north. And finally documentation of new finds to CEGSA Records.

Trip Report

On the way to our arranged meeting point at Nullarbor Road House, June and I spent one night at Minnipa with a friend, who in the morning took us to Pildappa Rock a large granite rock with pits deep and narrow, pans broad and narrow and wave shapes (flared slops). Also we went to the hillside where catchment for water is collected for town.

After night at Nullarbor Road House we went up Fisher Track to our camp site. Ken Boland, the pilot of Ultralite plane, had spent two days previous to us meeting him to find an appropriate landing field and had staked it with Wind Socks etc., hence when we took off the designated driver, Daryl Carr, drove his empty plane carrier to the site whilst Ken flew from Nullarbor Road House Airport to his picked site.
Another essential feature for our camping site is a disused Wombat dig outs for which makes ease for building a drop toilet.
Every vehicle was told to pick up wood near Yalata. Later in trip when wood was running out we did a trailer run east up an old track to find some wood, a 100 km round trip. I got a puncture on my four wheel drive. This was part of a bad two days as on the previous day I got a flat tyre on my motor bike, 10 km from the nearest track. Luckily Daryl Carr was within short wave radio on the cave he was looking at, as he carries a full kit of bike repairs with a hand pump.

All in all the group visited and documented 98 features, some caves and blow holes and collapsed dolines and rock pavements with water holes fully surveyed. Others just surface measurements and depths.

Besides ultralite sightings there was a large batch of Google Earth sites to check. A number of these Google sites and some air photos were from Paul Devine an ex country CEGSA member now deceased. There was X codes from Graham Pilkington and down south in our patch of old CEGSA known caves which was handy to take our Indigenous elders and our Policy Officer for Protected Areas as they were near recognized tracks.

June and I visited 46 sites, June spent some time with walking groups and sometimes as pillion passenger on the back of our motor bike. June walked approximately 60km with walking groups, whereas the motor bike ran up 600km. The walking group drive a car down recognized tracks to shorten the walks.

June at No1 waterhole at N-5867.
Photo: George MacLucas.

George in N-230.
Photo: June MacLucas.

June in N-5886.
Photo: George MacLucas.

June in N-230 with hand prints.
Photo: George MacLucas.

Mirning Elders Clem Lawrie, Dorcas Miller and Nathan Williams.

Ultralite with Nick, Ken and Darryl.
Photo: Hank Coppus.

Desert Cockroach (Blattodea) drought resistant insect.
Photo: Hank Coppus.

Thylacine Skull.
Photo: Hank Coppus.

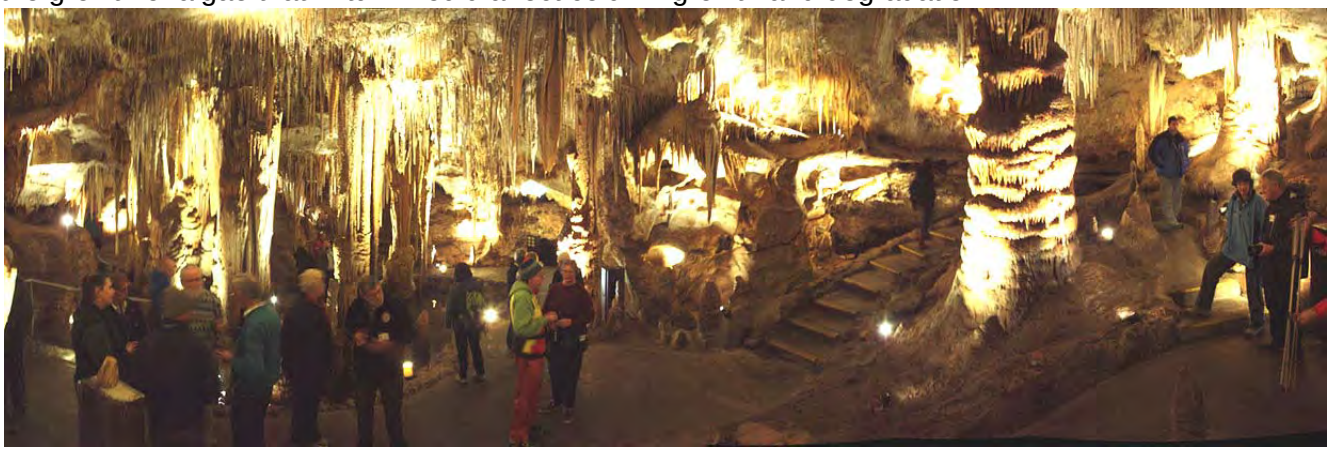
Karst features visited by June and George.
N111, N177, N230 (hand prints) N247 (collapsed doline) N1851, N3174, N3175, N5841, N5844, N5849 (large Blow Hole). N5851 Pavement with BH, N5852 (BH) N5856, N5857, N5858, N5859, N5862 (large collapsed doline) N5863, N5864, N5865, N5867 (large pavement four water holes) N5883 (large collapsed doline) N5884 (large collapsed doline) N5885, N5886 (good photography day) N5888, N5889, N5890, N5891, N5893, N5894 (5m deep, 20m chamber). N5895 (3 hole entry 100m passage). N5896, N5896, N5897, N5899, N6801 (lots of large shells). Whilst surveying Henry Shannon had two visitors (two kittens) checking his surveying equipment. N6810, N6815, N6816 N6817 and N6825 (blowing strong).

George MacLucas.

21st ACKMA Conference, 9-15th May 2015

Attendees: Graham Pilkington, Grant Gartrell, Kevin Mott, Ian Lewis and about 70 others.

On the Saturday and Sunday before the Conference, delegates visited caves around Naracoorte. I tagged along with Ruth Lawrence and her students from Latrobe University who were given the tasks of measuring cross-sections of Blanche Cave and also gathering data on the columns. The column measurements were to do an evaluation of the effect of entrances on their development and if any effect was noted, then to tune the collection parameters of follow-up surveys to get a better understanding of the entrance effects. It was anticipated that the presence of light would encourage the growth of algae that in turn would affect column growth and degradation.



Main chamber in Tantanoola Tourist Cave.

Princess Margaret Rose Cave, Glenelg River.

The mornings of Monday, Wednesday, and Friday were conference paper days. The afternoons and all Tuesday and Thursday were trips around the South East to caves, swamps, volcanoes, and tourist centres with a full day at the Naracoorte Caves Park. The accompanying photos show a few of the sites visited - Tantanoola Cave, Princes Margaret Rose Cave, and the cliffs along the Glenelg River (we did a boat tour along the river).

The main venue was the Naracoorte Town Hall and it matched the conference requirements perfectly. A display called 16-legs was held in the Town Hall at the same time. It was all about life found in caves and especially the mating habits of a troglobitic spider native to Tasmania.

Graham Pilkington

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30th ASF Biennial Conference, “Ningaloo Underground”,

21-26th June 2015

Attendees: Graham Pilkington, Aimee Leong and about 70 other ASF members.

The conference was held in the Exmouth Shire Hall. To get there I flew over to Perth on Friday to stay overnight with Ann-Marie Meredith. Next day we and two other WASG members – Tim Moulds and Asha Lane - set off north on a two-day drive, intending to pitch our tents along the way. But as night approached, the rain started. This was unexpected because the area that we were in was in a three-year drought. On a few occasions it was like driving into a waterfall and could see that the rain had set in for the night hence we turned back to a “retreat” that we had passed to see if they had any

beds available. This retreat was new; it was a farm that had decided to diversify because of the extended drought. The place was still being established and had all the rooms booked but camping-out was what we were trying to avoid! However, they had some rooms booked out to friends so after pleading for any available shed to camp in, the owner decided to "evict" her friends by moving them to somewhere else to free up a 4-bed room for us. And we were very thankful that she did. Overnight the rain really started coming down and by morning the nearby river was raging and the track out of the place was underwater. We got out by driving along the top of the embankment alongside the road then through the lake at the entrance to the property to get back onto the highway. Travelling on to Carnarvon was interesting. We figured that the bitumen highway was passable because vehicles were still travelling the other way. The raised road crossed an inland sea with the occasional floodway to be navigated. If we'd camped out on the road as we had intended, then we might have woken up kilometres from our vehicle.

Sunday was registration day, and the welcome BBQ, as well as getting to know Exmouth. The following two days were mostly for the presentation of papers. A workshop was held for about 10 people to construct a DistoX2 from parts. I'd bought mine already converted just as Mark Sefton had done a few weeks prior to me. By the end of the day, about 18 cavers at the conference had a DistoX! For those not in the know, a DistoX is a laser distance-measuring device that also measures bearing and inclination.

Wednesday was a field trip up to the tip then down the west coast of Cape Peninsula, visiting the North-West Cape VLF transmitter (a set of 300m high towers holding up a net of horizontal aerials to talk with submarines while they're submerged), the lighthouse, a well with blind white fish, several gorges, the fringing reef, and taking a boat ride up Yardie Creek.

Well with blind fish.

Rock Wallabies along Yardea Creek.

Thursday was the ASF Council Meeting and Speleo Sports day but did include a session for papers. Friday started with a couple of papers followed by me giving a presentation of OzKarst to demonstrate how it could be used. I fielded questions from the audience by showing how OzKarst handled it, and then invited cavers to join in the OzKarst project. Friday afternoon completed the ASF Council meeting that was started the day before.

The evenings were not idle but held SRT competitions, photograph displays, quiz night, and the Cavers Dinner.

Graham Pilkington

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Cape Range, 27-29th June 2015

Participants: Graham Pilkington and about 35 other ASF members.

Following the ASF conference at Exmouth, about half of the attendees participated in caving in the Cape Range. Most of the caves are vertical shafts with only a small horizontal extent about 40m down. I spent most of my time on surface walks to accurately locate a few of the 850 features

documented. Like many other caving areas in remote places, the early locations are vague because GPS was not available and landmarks are difficult to define. This was especially true for the Cape Range because travel is very difficult for vehicles, and tracks are rare.

6C-208 Entrance.

6C-315 surface solution.

6C-310 entrance.

6C-375 depression.

6C-301 entrance.

Most caves have an entrance near the head of a gully and are in an area of bare rock. Rillenkarren and deep solution holes are common. If features were catalogued as they are on the Nullarbor, then in many patches there would be a karst feature every few metres for several hectares. It appears that allocation of numbers has proceeded as for the Nullarbor – initially only large obvious caves were tagged, then smaller caves and large dolines, and we are now locating and exploring the caves with obscure or small entrances. Cape Range is about 20km wide and 100km long and almost impossible for a vehicle to cross or travel along which had deterred visitors until Darryl Brooks came up here and decided not to leave. There are still many unexplored areas and just like the Nullarbor, walking a slightly different path allows you find new caves in well-travelled places.

Mandu Mandu Gorge in Cape Range.

Graham Pilkington

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Bullita, 3-15th July 2015

Participants: Graham Pilkington, Mark Sefton, and 9 others from other ASF clubs.

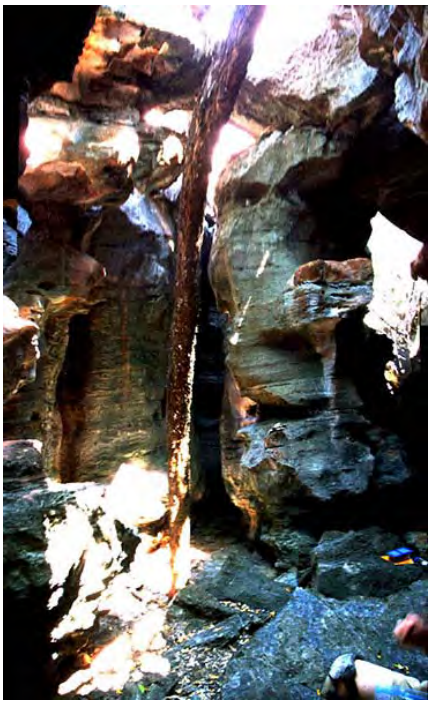
My first time to the Bullita caving area. After hearing so much about it from Mark Sefton and enticed by his presentations at CEGSA meetings, I decided that I'd take the opportunity to go following the ASF conference because I was "up that way". Of course it's the same distance from Exmouth as it is from Adelaide but I'd never been to the northern areas of Western Australia hence I got two new experiences for the price of one. I again hopped aboard with Ann-Marie Meredith and Tim Moulds and off we went from Cape Range. It took a comfortable four days to get there, staying at Tim's friend's place in Karratha, in the bush, and at a tourist resort in Kununurra where we met up with Bob Kershaw and bought provisions for the Bullita camp. Bullita is reached by travelling south along an unpaved road from Timber Creek. The main camp this year was at Solar Bore – very well set up with a large level cleared area, a water supply, undercover sink and benches, and on this occasion the Park supplied an electrical generator and 1.5m cooler box cube.

Of the eleven team members, five walked out to a secondary camp about 5km away so that they did not have to drive out each day. However, it did mean that they focused on a more restricted zone of karst than we did. Not that it mattered; they were in "new cave" country.

Bob Kershaw was in charge of survey projects. This was a natural outcome of him processing the survey data each year and drawing up the maps. Every day Bob brought out the cave maps and together with Mark decided on which "questions" in which caves would be investigated. Having 3 DistoX units available made surveying much easier and teams of 2 feasible (Bob, Mark, Ann-Marie, and I had DistoX units but Mark had supplied his for use in the other camp). The first task on the first day was to calibrate all the units hence we went into a large passage away from any magnetic material and used Bob's wooden support and a Bluetooth PC to do the job. It requires 56 readings each. A DistoX needs calibrating for very caving area because of the difference in magnetic inclination. The bearings presented by the units are of course magnetic hence there is no need to establish true north until the maps are drawn. Drifts in magnetic declination are compensated for in the "Compass" software that is used to process the cave survey data, by applying the adjustment uniformly to all reading taken on a year by year basis. Just like for Old Homestead Cave, all survey stations are given a code that begins with the last 2 digits of the year which makes it easier to determine when a reading was taken.

Because most of the large passages have already been surveyed, we got to investigate small passages that probably didn't go anywhere. Not true! On several occasions they were links into unexplored large tunnels. The smaller tunnels were also the ones that connected up "separate" caves – missed joins because cavers given the choice of which passage to survey did the easier large ones. There's also the problem of the wet season floods. We noticed plenty of evidence of flooding to a depth of several metres with fast-flowing water. These floods can bury spacious crawling tunnels making the map a difficult navigation tool. But the floods also excavate blocked passages allowing connections where none existed when the cave was previously surveyed.

Bullita cave entrance in sharp karst.



Bullita cave tree root

Most of the passages are formed under a grike and in section start at the surface as a narrow joint for 5-6m down to a phreatic level named the "mezzanine level" that is typically 1m high. Below that the fissure continues for a further 4-5m before expanding into the usual large A-frame "tent" passage with a flat floor that can be as much as 10m high (but when that high, the mezzanine is in the A-frame walls). The upper section is in a massive (meaning low-porosity and no fine structure) limestone whereas the A-frame is usually in a thinly-bedded limestone containing many inclusions.

Typical Bullita rift cave.

Perhaps the greatest difficulty is deciding if you are in a cave or not. In places, cave has either not developed below the massive limestone, or what cave there was is now full of debris. Sometimes these "high-level" rifts are essentially 1m wide 9m deep canyons open to the sky. How much the top section closes over before the majority agrees that the passage is in a cave is debateable. From a morphological point of view, these canyons are surrounded by and intersect with unquestionable cave passage and are at one end of a continuum in cave evolution. As such, the problem is not "is this a cave passage" as much as why do humans insist on placing everything into sharply-defined categories instead of admitting that nature does not.

The Bullita karst is an essentially north-south strip of discontinuous bare rock tens of kilometres long but usually less than a few hundred metres wide and lies along the western edge of low hills. The karst wraps around valleys cut into the higher ground and sometimes the incisions have removed all the cave-bearing limestone strata making it impossible for caves to be linked across some of the valleys. The hills are underlain by the limestone and overlain by shales containing 1-2m gently dipping none-cavernous limestone beds typically 5-10m apart. It's only after the shales have eroded off that karst development begins. Hence the caves only exist under the bare or thinly-covered rock. This makes it easy to find cave – just look on Google Earth for the exposed limestone.

The difficulty is how to get into the cave passage that should be there. On one occasion, I climbed up a fissure and out onto the surface, crossed the jagged karst for a few tens of metres and then climbed down again into new cave. This was done to find which of the tiny passages needed to be pushed to make the join. The exploit ended up "filling in" an area of karst that had lacked known passages between two caves. A similar fill-in was made elsewhere but on that occasion just digging out dirt-blocked tunnels was enough. However, many "questions" from previous surveys turned out to be trivial clarification of wall detail or surveying what had been badly sketched in the rush down large tunnels in the heyday of exploration.

Graham Pilkington

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Past Trips From General Meetings

PAST TRIPS FROM MAY GM

1. **FUSSI** members visited Beekeepers and Sand Cave just prior to the ACKMA conference
2. **Grant Gartrell** went to Delamere to speak to the new land owner about the caves on his property. The cave itself is hard to get to due to a significant growth of Blackberries. The will need some work do to allow access to the caves. Land owner seems happy to allow access.
3. **Matt Smith** visited to Corra-lynn with SCG members, entering via Skeleton Crevasse, all the way in to Limestone Bridge and then out via Bandicoots Bypass. It was a long trip!
4. **Eddie Rubessa** noted sink holes off the Mallee Highway near Sherlock heading towards Lameroo. Seemed like decent collapses, but no obvious indication of actual caves.
5. **Cameron Roy** visited Mairs & Clara St Dora with work. A good time was had!
6. **Graham Pilkington** visited Old Homestead cave with Alan Pryke and a Disto X device to help with surveying. While discussing the survey Alan offered his services to digitise the cave survey. Graham discovered that not much had been digitised, but this has now been done.

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PAST TRIPS FROM JUNE GM

1. **Eddie Rubessa, Grant Gartrell, Ray Gibbons** and **David Brown** went to Delamere to look at holes that were filled up with silt and blackberries. Planning another trip. Met the new owner “Mo”, and took him down to the feature. Fence needs to be built to stop cows getting on. Relationship with owner is good!
2. **George & June Maclucas** visited the Nullarbor. Ultralight was out looking for new caves. A few younger people (in their low 50s) made it along to the trip. Visited 98 sites as a group. One cave found with a lot of hand prints was surveyed by *Kevin Mott* in the 80s, but there was no record of the handprints. George got a flat tyre 10km from the nearest track, repairs didn't work but the radio did! George & June visited 45 sites themselves. One cave seemed to have a number of thylacine skeletons inside it. *Henry Shannon* from Tasmania surveys the caves in great detail and continued surveying a cave while there. While surveying he was attacked by kittens! Universities are very keen for cavers to collect data and specimens from the cave.
3. **Cameron Roy** visited Mairs Cave on the 31st May & 1st of June.
4. **Matt Smith**, **Mark Corbett** and **Cameron Roy** visited Naracoorte with a group of Venturer Scouts. Caves visited included Blackberry, Wet Cave, S102 and Beekeepers Cave.

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PAST TRIPS FROM JULY GM

1. A Scout trip of six Venturers went to the Flinders Ranges. **Ian Lewis** attended the trip and discovered that he can no longer enter the inner sanctum of Mt Simms Cave.
2. **Neville Skinner** visited the Nullarbor. They placed data loggers in some caves and collected guano samples for Mike Snow. A Zebedee map was made of Capstan Cave and the entrance chambers of Cocklebiddy Cave. A flying fox system was left in Eucla for use by cavers requiring it.
3. **Ken Smith** did some caving in Vanuatu.
4. **Ken Smith**: CDAA’s number one member (that is, membership number 1) went for a dive in Tank Cave. He wanted to do something special for his eightieth birthday anniversary and hopes to repeat the experience on his ninetieth.
5. **Graham Pilkington** did some caving in Cape Range in WA, and with **Mark Sefton** at Bullita. More on this next meeting.

TECHNICAL and OTHER ARTICLES

MEMBERSHIP FEES

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 to renewals 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	Trip Co-ordinator only
Chris Gibbons	Trip Co-ordinator only
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 Co-ordinators.
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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Library Report

Joyce Bakker has kindly donated some caving materials to CEGSA. These include many copies of CEGSA NEWS and ASF Newsletters; SAMAF Bulletin issues 1 and 8; 2 sets of folding cooking-pans; over 300 photographic slides; and 90 newspaper/magazine clippings. The clippings and slides are mainly from the late 1950's to mid 1960's.

In the last few years, several of our long-standing and previous members have donated valuable records and books to CEGSA. If you, or someone you're in touch with, no longer has use for their old caving materials and doesn't want to have them tossed into the rubbish bin on their demise, then PLEASE send them to CEGSA. Some very valuable and irreplaceable records have been lost in the last few decades because non-cavers did not understand the value of what they were disposing of.

Graham Pilkington

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ASF Representative's Report

At the Council Meeting in Exmouth in June, the ASF extended their *Introductory* membership from 3 months to 12 months at no extra cost. Following on from this, the CEGSA Committee has established that our $25 3-month Introductory Associate membership can be converted to Associate membership lasting a further 9 months for an extra $52 before being normalized to the calendar year in continued membership.

I accepted a position on the ASF Executive so that South Australia will maintain a presence on the national body after the resignation of our Stan Flavel as ASF President.

Graham Pilkington

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OzKarst Administrator's Report

A new procedure has been set up to allow ASF cavers to use OzKarst free of charge. It requires each individual to agree to the terms set out in an agreement. Essentially the agreement is that they will not distribute the OzKarst software and that they acknowledge that the OzKarst software is owned by CEGSA.

They're free to distribute any of their own data without restriction. However, they can sign a further agreement on data distribution that allows them to participate in data exchange. This agreement outlines the restrictions in dissemination of the data that they receive. The intention is to create collaborative groups of people who are working in the same karst area. In the ideal case, all the data collected will be sent to the State karst data coordinator who will then send it on to an Australian achieve. Neither the State karst data coordinator nor the Australian achieve centre are intended as data distributors, however, they can facilitate data exchange with the agreement of the originators of the data sets.

About 35 ASF cavers have signed up for OzKarst.

Graham Pilkington

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Guano Minerals by Michael Snow

I am an Honorary with the Minerals Department in the Museum. I attended the May meeting to explain that I had a collection of 90 year old guano specimens from caves in SA collected by the former Mines Department. I have published the results from the Wooltana cave, the abstract can be found by googling "wooltana guano". Graham has kindly asked me to contribute this note to the newsletter seeking help to obtain more guano specimens.

I find that the mineral assemblage in each cave is very different from other caves and I would like to get more samples for analysis.

I follow with the working abstract of the paper I am writing at the moment.

Cave Minerals of South Australia

MICHAEL R. SNOW AND ALLAN PRING

Department of Mineralogy, South Australian Museum, North Terrace, Adelaide, South Australia, 5005

Email addresses: mrsnow@adam.com.au, allan.Pring@samuseum.sa.gov.au

Analysis of guano specimens collected by the former Mines Department from Clara St Dora and Buckalowie Creek caves and in 7 other caves in South Australia show a wide variety of minerals assemblies. A new unnamed mineral is identified in a cave near Naracoorte which has the same diffraction pattern as a synthetic calcium sulphate phosphate of variable composition $Ca(HPO_4)_x(SO_{4)(1-x)}\cdot 2H_2O$ with .42<x<.54 known as CPSH. The minerals that occur in more than two samples, are *ardealite* $Ca_2(HPO_4)(SO_4)\bullet 4H_2O$, *brushite* $CaHPO_4.2H_2O$, *calcite* $CaCO_3$, *gypsum* $CaSO_4.2H_2O$, *hydroxylapatite* $Ca_{10}(PO_4)_6(OH)_2$, *quartz* SiO_2, *spheniscidite* $(NH_4,K)(Fe^{3+},Al)_2(PO_4)_2(OH)\cdot 2H_2O$, *sylvite* KCl and *whitlockite* $Ca_9(Mg,Fe)(PO_4)_6PO_3OH$. Minerals seen only once include *syngenite* $K_2Ca(SO_4)_2.H_2O$, *anhydrite* $CaSO_4$ and amphthitalite, $K_3Na(SO_4)_2$. Spheniscidite is only known from its original discovery in Antarctica. The mineralogy of the guano samples was determined by powder X-ray diffraction and EDAX.

Vale: Elery Hamilton-Smith, Life Member and Founding Member of CEGSA

Elery was a giant figure in Australian speleology and renowned internationally for his innovative and far-sighted work in the fields of cave biology, karst conservation and cave management. His recent passing has generated many tributes and accolades for his vast contributions to these fields and also a great many warm memories from his extensive network of friends and associates. As well as a skilled and insightful scientist, he was very much a 'people person'!

Elery has a special place in the life of CEGSA as one of its principal founding members in 1955. There are several important reasons for this with their connections continuing to be a major part of CEGSA's direction and activities today, 60 years later.

Elery was born in 1929 and grew up around the beautiful farming hill country of Mount Compass. There, his life experienced three profound influences which contributed to his wide-ranging excellence in several walks of life –

Firstly, he was initially not very healthy as a young boy so he was home-schooled in this rural environment in his early years, so he had time and location to learn a great deal about the natural world and to develop early perceptions of the environment.

Secondly, he was very widely read, encouraged by his mother, and raised in a family environment which was strongly oriented through the Unitarian Church movement which believed in a very strong link between enlightened Christian belief and science, philosophy, reason and rational thought, underpinned by a firm focus that humans have the ability to exercise free will in a responsible, constructive and ethical manner with the assistance of religion.

Thirdly, as a teenager and young man Elery had as one of his mentors David Uniapon, whose image is on our $50 note. David was a highly- educated aboriginal Elder who excelled at science and technological invention as well as representing the views and customs of his people at a time when aborigines did not have Australian citizenship or the right to vote. This mentor relationship strongly influenced Elery's social conscience and life motivations.

All this combined within Elery as an observer of nature, philosopher, scientist, teacher and leader of people, particularly for the values of the natural world. Elery did extensive bushwalking with the Adelaide Bushwalkers but a motivated subgroup within them became interested in **caves**! They really set to work to find out about all the caves in South Australia they could find. Bushwalkers Chamber in Corra-Lynn Cave was discovered and named by them. Elery was also a Scout Commissioner and was responsible for the strong Scouting-based input to CEGSA which has underpinned our membership ever since. All this activity culminated in combining with Captain J Maitland Thomson on an expedition to the Nullarbor Plains to discover and explore the huge and mysterious caves there.

Some Memorial Service Attendees. Back row: Steve Bourne, Brian Clark, Cath Belkirk, Dale Calmin and Miles Pearce.Front row: Angela (Elery's wife), Kent Henderson, Andy Spate and Ian Lewis. Elery's portrait by June MacLucas in background. Photo: Kent Henderson.

Following that expedition, Elery, Thomson and others including Bob Sexton, Alan Hill and Noel Mollett formed CEGSA at a meeting in 1955 at the SA Museum under the initiative of Professor Hossfeld of the Adelaide University Geology Department. This explains CEGSA's continuing links with the SA Museum and systematic records and trip reports which form such a valuable State record of karst and speleology which Elery particularly encouraged. He also specialised in

studying bats, already beginning to understand that bat numbers and species variation were under environmental pressure. Elery was also one of the first cavers to recognise the unique nature of caves as scientific time capsules. A great deal of his work in recent decades was devoted to raising the awareness of the uniqueness of caves and karst and conservation initiatives to protect them.

But above all, he was a very generous man with his time and attention to others, encouraging all of us to pursue our caving interests as part of a much greater environmental picture. Elery set the agenda and philosophical direction of CEGSA so that i t was never only a sporting club but an organisation which took responsibility for South Australian karst. It was excellent that CEGSA could be represented at his memorial service in Melbourne where we could acknowledge our gratitude in knowing this very special man and his profound contribution to speleology in our State.

Ian D Lewis.

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FUSSI Program September to December 2015

Sept 10th:	General Meeting:	Trevor Arnold. State Emergency Service, Rigging workshop. TBC.
Sep 12-13th:	Southern Flinders.	Caving in the semi-arid Flinders. A not to be missed trip! Thomas and Aimee coordinating. Email: fussi@fussi.org.au
Oct 22nd:	General Meeting.	Ian Lewis on Rocks. Tania Wilson on Geology.
Oct 25th: Sunday	Caves South of Adelaide	One day of surface exploration. Let's see what we find. Bring your walking boots. Meet Myponga Café. Thomas and Aimee coordinating. Email: fussi@fussi.org.au
Nov 26th:	General meeting.	First Aid, Caves and you.
Nov 29th: Sunday	Murray River.	A day of boating and looking for caves south of Swan Reach. Thomas and Aimee coordinating. Email: fussi@fussi.org.au
Dec 4-7th:	Tassi fly-in fly-out.	Numbers limited to 6 only. Clare coordinating RSVP JUNE 20th. If your name is not on the list then *you don't go* as Permits have to go in ASAP.

For the Future:

2016.
Easter Nullarbor

March NZ.

CEGSA Members are welcome to attend any FUSSI trips.
Contact Mark Sefton, Neville Skinner or Aimee Leong if you are interested in attending.

CEGSA CALENDAR OF EVENTS

Date	Type of Event	Description	Contact
26/08/15	General Meeting	Royal Society Room, SA Museum, Adel. New Discoveries in and under the Bunda Cliffs .	Steve Milner
29/08/15	Working Bee	Library and records	Graham Pilkington
05/09/15	Caving	Search and Rescue Exercise Naracoorte	
??/09/15	Committee Meeting	TBA	Graham Pilkington
23/09/15	General Meeting	Royal Society Room, SA Museum, Adel. Subject TBA	Graham Pilkington
26/09/15	Working Bee?	Library and Records	Graham Pilkington
??/10/15	Committee Meeting	TBA	Graham Pilkington
28/10/15	General Meeting	Royal Society Room, SA Museum, Adel. Subject TBA	Graham Pilkington
31/10/15	Working Bee	Library and Records	Graham Pilkington
??/11/15	Committee Meeting	TBA	Graham Pilkington
11/11/15	CEGSA NEWS	Articles due for November CEGSA NEWS	Athol Jackson
25/11/15	General Meeting	Royal Society Room, SA Museum, Adel. End of Year BBQ	Graham Pilkington
28/11/15	Working Bee	Library and Records	Graham Pilkington
??/09/15	Committee Meeting	TBA	Graham Pilkington
23/12/15	**NO General Meeting**	**NO GENERAL MEETING**	Graham Pilkington
	Training	Ad Hoc training	Ian Lewis and Matt Smith
	Caving	Ongoing Vic Fossil survey	Gary Woodcock
	Caving	Continuing Fleurieu Peninsula Exploration	Grant Gartrell

****Extra trips will be notified on the website and through CEGSA e-News via email****

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.
Also, please ensure that a report of the trip is submitted to the Records Officer in a timely manner.