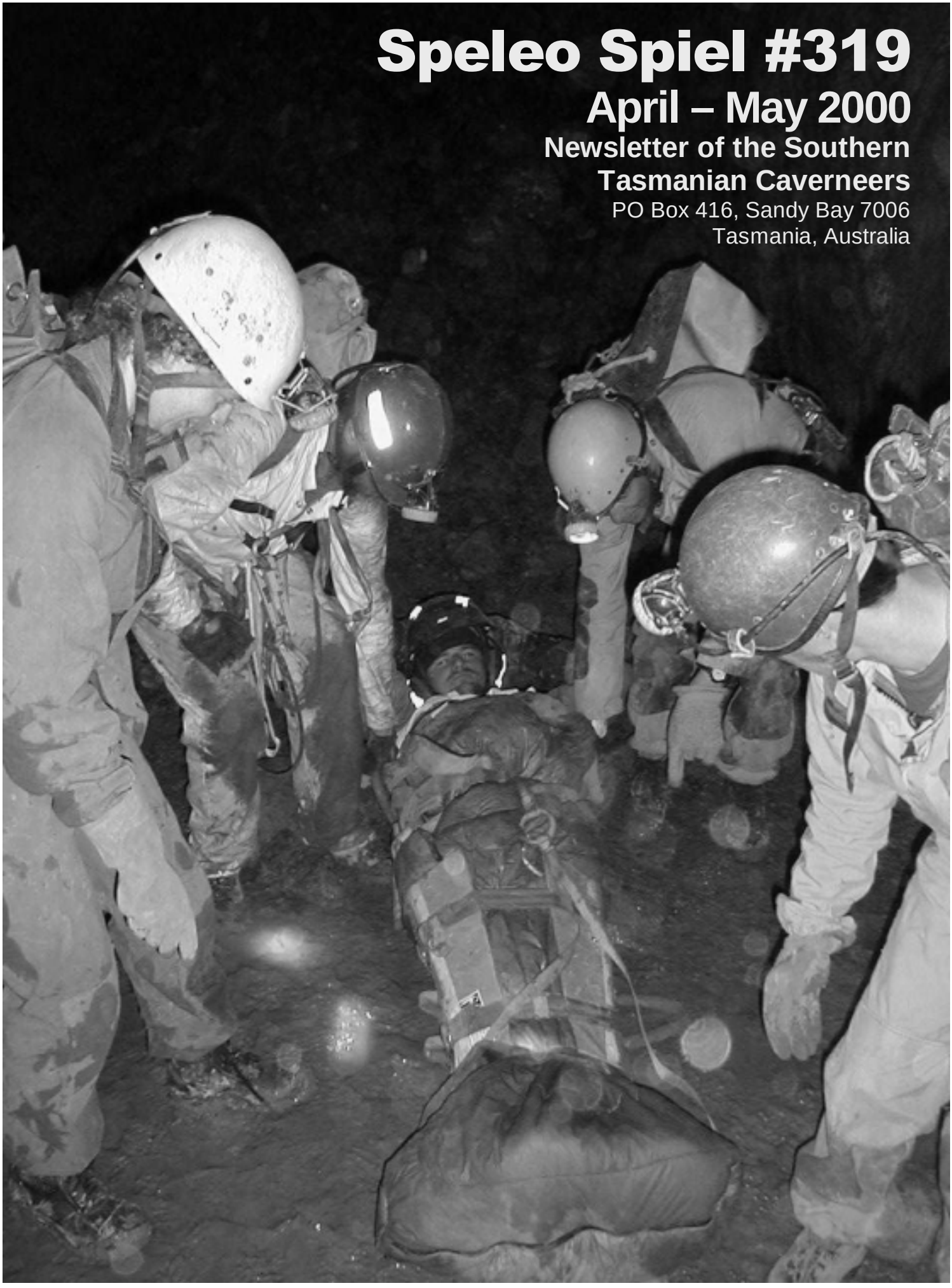
Speleo Spiel #319

April – May 2000

Newsletter of the Southern Tasmanian Caverneers

PO Box 416, Sandy Bay 7006
Tasmania, Australia



Front Cover Photo
CAVEX 2000 – Cave rescuers preparing for the lift in the back end of Mystery Creek Cave. **Photo by Arthur Clarke**

Back Cover Photo
Helictites **Photo by Jeff Butt**

The Speleo Spiel

Newsletter of the
Southern Tasmanian Caverneers Incorporated
PO Box 416, Sandy Bay, Tas. 7006
http://www.tased.edu.au/tasonline/scaving/

Issue No. 319
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STC was formed from the *Tasmanian Caverneering Club*, the *Southern Caving Society* and the *Tasmanian Cave and Karst Research Group*. ***STC*** is the modern variant of the Oldest Caving Club in Australia.

Editorial

This is another bumper issue of the Spiel; it should keep you going until the snow melts while your enthusiasm for venturing underground may be at a minimum.

Our president recently celebrated his 50th birthday.....having removed his beard for the occasion, he looks very fresh-faced and has held his age well. Congratulations on 50 Trev. I hope we are all caving as well when we hit the half-century mark!

On a sad note: my old Scout Venturer Leader and good friend, Steve Edgar passed away on the 16th of May. Steve introduced me to the world of caving along with many other adventure activities. Many will sadly miss him.

Jamie Allison
Editor
jamie.allison@dspl.com.au

Club Meetings

General business meetings are held on the first Wednesday of each month (7:30pm for a 8:00pm start). Social gatherings and special events are held on the third Wednesday of each Month starting at 8:00pm. Meetings are convened at the Shipwright Arms Hotel in the area just inside the front door (near the fireplace). All are welcome and encouraged to attend.

Wednesday, June 7.	General Business Meeting
Wednesday, June 21.	Social Gathering and Slide Shows
Wednesday, July 5.	General Business Meeting
Wednesday, July 19.	Social Gathering

Upcoming Trips and Events

Please contact the trip organiser for more detailed information.

June 21 (Wed)	Jeff will show some caving in NZ slides... and maybe Hugh and Liz can also show some caving slides from Vietnam...between us there might be enough slides for a reasonable show! **Jeff Butt**
June 24 - 25	Pre-GST and post winter solstice caving extravaganza (full details on page 3) **Liz Canning**

Letters to the Editor

This is your chance to comment about the articles presented in this newsletter. Letters to the Editor may be edited for clarity. Your submission can be emailed to the editor at jamiea@dspl.com.au or to posted to: Speleo Spiel Editor, PO Box 416, Sandy Bay, Tasmania. 7006.

Speleo Spiel Index

Congratulations on a great job as new Editor of SPELEO SPIEL, following on from the example lead of Jeff Butt, which followed on from the inaugural efforts by John Hawkins-Salt. Just a brief comment about a possible item of improvement or addition to the Spiel.... Maybe sometime after say, either issue #320 or maybe at end of this year (2000), we could run a single issue of Speleo Spiel, or part of an issue(??) that is an index of the last 20 issues of Spiel or all those issues up to end of year or whenever the index is done. The index could be done in sections, similar to the Index format in the special Index issue of Southern Caver (e.g., the October 1985 index issue), where there are indexed references listing each issue of Speleo Spiel by Content, index by Author, index by Title, index by Subject Matter and perhaps index by Karst Area. I figure that the workload for this could be easily spread around with say ten members (with email access) each member doing two issues each - or five of us doing four issues each - so that it does not all fall on the hands of the editor or just one or two interested people.

What do you and other readers think?

Arthur Clarke

arthurc@southcom.com.au

From the Gear Store

For most of April and May the rope-rack has been rather empty with Niggly, Splash Pot and KD rigged...things should be back to normal soon!

The Annual Rope Testing day was held on Saturday June 3rd after being delayed by a week due to heavy rain last weekend. Details in the next Spiel.

New Club Members

A very warm welcome to our new club members.

Full Members:

Mike Weeding, Susan Ingram and Phil Rowsell

Prospective Member:

Chris Ward

Emailing the STC List Server

There seems to be a few strange things happening to the STC List Server of late. To send a message to everyone on the list, simply address your message to: *stc@postoffice.tased.edu.au.* To email the list owner, Arthur Clarke (for list problems etc.) send a message to *owner-stc@postoffice.tased.edu.au*

Forward Program: Pre-GST and Post-Winter Solstice Caving Extravaganza: June 24 – 25

By Liz Canning

The moment you've all been waiting for:

Come for a weekend of caving, eating and drinking, and sitting and chatting in front of open fires at Tyenna Valley Lodge, Maydena. Caving possibilities are as wide as your imagination, but will certainly include some trips for the newer members of the club, such as Gormenghast (no SRT required but some climbing), and perhaps Sesame or Three Forty-One for those with some SRT experience. Depending on who decides to come we may also get access keys for some horizontal caves. And then of course there's always Splash Pot.... Accommodation for Saturday night is $27 per person in twin or double rooms. This includes a shared kitchen and lounge, and breakfast is provided. There are also some frosty campsites available at $5 per person, and include use of the showers / kitchen.

If you want to book in for accommodation or camping, please let me know by June 13th (or earlier if possible) on email (liz@dpiwe.tas.gov.au) or phone 03 6223 7088. If you want to book in for dinner on Saturday 24th, at around 7:30 pm (and are confident of emerging from your chosen cave in time!), then also let me know this. And to add to the fun there are at least 2 cavers' birthdays at this time- but they wont tell you who they are!

♦ ♦ ♦

Reconnaissance Investigation of South Styx Dolomite: 26-27/11/1999

Party: Chris Sharples, Rolan Eberhard

By Rolan Eberhard

The presence of karstified dolomite in the valley of the Styx River, south of Maydena, has been known since 1986 when Stefan Eberhard explored a large enclosed depression on the southern side of the river. This depression, which covers an area of several hectares and is large enough to be mapped on the 1:100 000 Tyenna sheet, yielded a small streamsink and minor cave (Eberhard 1986). Subsequent geological mapping has clarified the potential extent of the dolomite, indicating that it extends southwards along the South Styx River to its headwaters on the slopes of Nevada Peak and the Snowy Range (Skeleton 1:25 000 geological sheet). Additional extensive and poorly explored dolomite deposits lie to the west and south along the Weld River and at Mount Weld. Much of the geological mapping in this areas was done by Clive Calver, who wrote about the area's potential for new caves back in 1991 (Calver 1991). More recently, Chris Sharples has investigated the northern portion of the dolomite as part of a karst survey for Forestry Tasmania. Chris' discoveries include, amongst other things, some modest caves. As far as we are aware, our trip to the South Styx was the first trip to explore for karst features in the southern part of the dolomite. Chris has stated that he will prepare a report on the Styx River karst generally for publication in this magazine. The present report is confined to our brief trip to the South Styx area.

The first day involved a drive south from Hobart to the valley of the Russell River, which rises on the eastern slopes of the Snowy Range. After a minor delay locating the takeoff point for the track to Nevada Peak, we shouldered packs and headed up the hill. Our intention was to camp that night on the crest of the Snowy Range in preparation for the next day's foray down the other (western) side of the range. We reached our intended camp late in the afternoon after a diversion to the summit of Nevada Peak. It was a magnificent day in the southwest and the sunset from our camp on the col between Wetpants Peak and Scrivens Cone where we put our tent was particularly good.

Next morning with daypacks only we traversed north to a ridge extending west below Scrivens Cone. Our aim was to follow this ridge down to the putative level of the dolomite (the presence of the dolomite had not actually been verified on the ground). Conveniently, the same ridge also provided a relatively direct route to a confluence of creeks (DN703504) which seemed a potentially worthwhile place to start looking for caves. We had about 500 m of height to loose to reach this point. The descent of the ridge proved relatively straightforward, even if the donga was pretty scrubby in places (coming back uphill was somewhat tiresome, particularly in the several hundred metres of scrub between the forested lower slopes and the alpine vegetation near the top). Approaching the confluence of creeks we soon obtained confirmation of the presence of dolomite in the form of a silicified dolomite boulder in the bed of the creek we were following. This was an encouraging result as we were very close to where Clive had predicted the location of the contact between the dolomite and non-carbonate sedimentary beds forming the mid slopes of the Snowy Range.

At the confluence of creeks, there was no obvious evidence that the creeks were losing flow to underground drainage, as might be expected if the dolomite was highly karstified. All the creeks we encountered carried flows that seemed reasonable given the very dry conditions prevailing. A nearby feature we had identified on the map as worth investigating proved somewhat more rewarding. This was a conical hill rising about 70 m above the confluence of creeks on their western side (DN700507). Chris had suggested this feature could indicate silicification of the dolomite, raising the possibility of features like the crystal caves at

nearby Mount Weld. Abundant outcrop in the form of bluffs and crags confirmed his theory that the dolomite was silicified. However, although there were some minor fissures and overhangs no caves were located. The karst features appeared to be limited to weakly developed karren and some shallow sinkholes. Before retracing our route back up the ridge, we made a brief reconnaissance in the downstream direction, reaching as far north as about DN701512, without locating anything suggestive of karst or seeing further bedrock outcrops.

After retracing our route up the ridge, we arrived back at our tent around mid afternoon. With several hours daylight still available, we decided to head back to Hobart. In fact, we had allowed three days for the trip, but the opportunity of gaining a day with no commitments provided the incentive to pull out. We made it back to the car on dusk and then dodged wildlife to be home around midnight.

Although this trip failed to find any caves, it did confirm the presence of dolomite predicted by geological mapping (a credit to the work of Clive Claver). It also showed that the dolomite is karstified, suggesting that it may also be cavernous (this has already been confirmed on a limited scale for the northern part of the deposit). Despite this, neither of us is planning a return trip in the immediate future and much of this sizeable karst area could remain unprospected for caves for some time, except perhaps those parts of it in the north which are subject to forestry.

References

Calver, C., 1991; Geological Background to Karst in the Weld River Area, *Tasmanian Cave and Karst Research Group Journal* **5:** 21-26.

Eberhard, S., 1986; New Karst Area: Styx River, *Speleo Spiel* #**214:** 3.

Addendum to the Junee-Florentine Caves List

By Arthur Clarke

In the last issue (*Speleo Spiel* #318) there was a list of the known caves in the Junee-Florentine karst of southern Tasmania. As may have been expected, the list was not perfect: I discovered a few mistakes and in addition, Jeff Butt and Rolan Eberhard have pointed out some errors – SO YOU SHOULD AMEND YOUR LAST *SPIEL* NOW!!

Firstly, JF-X64 and JF-X65 - originally reported by Andras Galambos as Holes 1 and 2 in *Speleo Spiel* #312 - are both in vicinity of Satans Lair (JF-365). My apologies to Andras for mistakenly attributing his article, titled: "*Surface wandering in the Junee-Florentine, 10/1/99*" to Jeff Butt (as "J. Butt, 1999a") – please substitute this to read in the "Data Source" column as: "A. Galambos, 1999", with full reference to be cited as:

Galambos, A. (1999) Surface wandering in the Junee-Florentine, 10/1/99. *Speleo Spiel*, **312:** 10.

Another additional reference in the Data Source column relates to JF-162; this should now read as "J. Parker, 1978a" (see below). The listed reference should be cited as:

Parker, J. (1978a) "Florentine Valley 8-10-78" *Speleo Spiel* **#140:** 3-4". The other previously quoted "Data Source" for "J. Parker, 1978" – relating to JF-172 – listed in the references as "Parker, J. (1978)", should now be shown as "**Parker, J. (1978b)**".

Rolan Eberhard advises that *Coles Creek Cave* (JF-X55) is definitely a different cave to *Follets Swallet* (JF-X121). Quoting part of a recent email from Rolan, he states:

1. *I can confirm that Coles Creek Cave and Follets Swallet are not the same cave. Coles Creek Cave is an un-named cave referred to as TL54 in Russell's report (Drysdale 1992). Kevin Kiernan, who had explored the cave previously, showed it to me in about 1990. Follets Swallet is a separate cave associated with an underground meander by Coles Creek. For a description of this cave, see my trip report in Speleo Spiel 301. The creek resurges from another entrance a short distance from the swallet. The two caves are undoubtedly connected but cave diving would be required to make the traverse.*
2. *JF161 is located in the Junee Cave area of my 1994 report to Forestry Tasmania. Specifically, it is located in the vicinity of The Chairman (JF99) and is described in a trip report in Speleo Spiel 135. In Arthur's list, the 'approximate area' field for JF161 is blank. Note that Table 3.2 (cave list for the Junee Cave area) in my 1994 report mistakenly omits JF161 and JF162.*

A summary of additional notes and amendments to the Junee-Florentine caves list:

JF-8 (*Junee Cave*) is also known as "*Junee Resurgence*";

JF-161 is located in the Junee Cave Area. Data Source: from *Speleo Spiel*, 135;

JF-162 - Data Source: J. Parker, 1978a (see above);

JF-172 - Data Source: J. Parker, 1978b (see above);

JF-233 (*Troll Hole*) discovery by Phil Jackson (1986). Data Source: J. Butt pers. comm.;

JF-234 (*Sump Pot*) discovery by Jeff Butt (1986). Data Source: J. Butt pers. comm.;

JF-X55 *(*Coles Creek Cave*) should read as "TL-54 in Drysdale 92", not "TL-32?" - discovery by Kevin Kiernan (1990). Data Source: R. Eberhard pers. comm.;*

JF-X123: This was mistakenly listed in *Speleo Spiel* #318 as "TL-32 in Drysdale, 92" in "KID History" column, the same as for *Follets Swallet* (JF-X121). Apologies: this was a "typo" - JF-X123 should read as being "Streamsink (TL-46)".

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Babes in Wonderland, Welcome Stranger – JF229 :28/11/1999

Party: Jamie, Sharon, Jarrod and Monica Allison, Steve, Kathy and Grace Bunton By Steve Bunton

Finding fun things for the whole family to can be a taxing, combining it with your favourite adventure pursuit can be almost impossible but the annual STC dinner did at least provide the incentive to get us out of the house, off the couch, away from the video and up to Maydena. On Saturday I thought a nice stroll in the rainforest out to the entrance of KD might be interesting but I took the wrong turn, ended up bogged in an innocuous looking a mud puddle. Grace thought digging the car out was brilliant fun and "When can we do it again daddy?" My answer: "When I've saved up enough money to buy another slab for the kindly locals who dragged me out with their 4WD!" I had boiled my arse off walking back to Maydena in the blistering sun. (It seems I've trudged this road so many times with broken down cars or being locked in behind gates etc.)

It was interesting that the current Maydena locals no longer know where KD is, nor any of the other caves other than Growling Swallet. They were unfamiliar with the roads and caves above Junee as I tried to inform them of whereabouts I was stuck.

So somehow we got back to civilisation and a stroll in the forest is still on the hit-list. We spent a pleasant 35 degree day with no wind drinking sundowners on the porch of the Tyenna Lodge whilst watching local boy Ricky Ponting edge his way to a double century in Perth. (He bloody got out for 196, the mug!)

Back L-R: Kathy Bunton, Grace Bunton and Monica Allison. Front: Jarrod Allison in Welcome Stranger (JF-229).
Photo by Steve Bunton

The next morning we headed off to Welcome Stranger. The strangest thing about this is getting the key the to the gate. I knew the cave had been gated since Forestry had taken over its management. What I didn't realize was how ridiculously easy it was to get a key. All you do is pay $50 deposit and that's it, no ID, no requirement to be a member of a caving club, no post-trip report nor anything else. I was a bit disturbed by his laxity. *[The process for obtaining the key has since been tightened up. Only members of a caving club or other authorised groups can access this cave. Ed.]*

Next morning we all dressed in "make-do" caving gear. After years of caving having the right gear and taking all the safety precautions, I get a real kick out going on these easy trips with one light per person and wearing an old raincoat... mind you kids get a thrill out wearing a helmet! Again it was a perfect day and we dropped out of the pristine regrowth into the gloom of the cave. In all my years, about 3 trips total, of going to Welcome Stranger I had only ever gone in the bottom entrance, I didn't know there was a top entrance. I was therefore slightly confused when I had a key to a gate that didn't exist in a very barred up entrance. I had heard stories of people pulling the gate off with 4WDs necessitating re-gating and again I'd assumed it was this entrance. They'd tried again and the gate was bent sufficiently to allow us to squeeze past it, making the need for a key obsolete.

We squeezed inside, the larger people with a little difficulty and the little people with the occasionally bumped head from standing up too soon in the squeeze. We continued on until we met the stream at the point it disappears into the sump and then a bit further carrying the kiddies over the deeper pools. (Little peoples "wellies" do not get much past big people's ankles.) Eventually the pools got deeper and longer and the carries more taxing so we called it quits and headed out. Jamie and I took a few "happy snaps" to stick in the family album.

Disappointingly I noticed a lot of stal debris on the mud floor or the passage and in the stream. Much more than I'd ever remembered. Since it is quite easy to avoid most stals in this section (even carrying a kid!). It looked as though it was the result of visitors removing stals as souvenirs, which is tragic. It would have been interesting to see the rest of the cave, which is more highly decorated, and note the level deterioration since my last visit of December 1991.

So that was it really. We had a great time and will probably do a few more of these kiddy trips in future.

♦ ♦ ♦

Mt. Owen, New Zealand-Viceroy Expedition: 25/1/2000 – 25/2/2000

Party: Roger Taylor (VSA), Paul Brooker(VSA), Eric & Sharon Lenser(VSA), Mike Lenser(VSA), Dale Appleton(VSA), John Sherry (Ireland), Andras Galambos, Jeff Butt By Jeff Butt

Andras and I became last minute STC additions to this expedition; being able to 'jump on' at the 'twelfth hour' was quite a bonus as most of the hard organisational work had already been done; all we had to do was basically turn up and contribute to the expedition funds.

The main aim of the expedition was to continue with the work started on the previous expedition; primarily to continue with the exploration of 'Viceroy Shaft (NO-604)'. A version of this work was written up by Peter Ackroyd (see "VSA Exploration in New Zealand", *Australian Caver* 147, May 1999). Viceroy lies above the tree-line, about 2km northwest of Mt. Owen, which itself is part of a huge limestone massif, hosting many caves including Bulmer Cavern which is some 750m deep and ~40km long.

Roger Taylor (VSA) *negotiating a cascade*

The Viceroy entrance is located at 1429m ASL near the top of a ridge that heads Southwest towards the Fyfe River. Viceroy descends within this ridge towards the Fyfe River (away from Bulmer Cavern) and it is likely that it resurges somewhere down there. Looking for resurgences on the Fyfe was also an area of interest for the expedition. The valley floor to where Viceroy is heading is around 740m ASL and thus the depth potential is around 690m. Thus the potential for a deep and extensive cave was certainly there.

Viceroy itself changes character several times; near the surface it is full of frost-shattered rock and is quite loose and unpleasant. Once down to the streamway proper it is like a small version of Khazad-Dum with many small waterfall pitches. There are several very nice marble streamway sections with some lovely cascades and water races. Half way down it goes through a horizontal section for about 300m of passage, and then returns to the K.D. style of cave. There are several large chambers, but the nature of the cave is very much a staircase of short pitches interrupted by short horizontal sections. Further down, the cave takes on a more serious nature, it gets wetter and the quality of the rock deteriorates making it difficult to find good rock for anchors.

Last year Viceroy was estimated at ~400m deep but was not bottomed due to a lack of time and gear. This year we had ~800m of rope and had allowed two and half weeks on the mountain, so it was hoped that we would have enough resources to be able to see Viceroy to some sort of completion. Of course we would still be subject to the vagaries of the weather, which indeed was to become one limiting factor. Access to our camp was delayed due to a couple of days of wind and rain. During this time both Andras and John reached their limit of sitting it out in the pub, and so walked in, encountering some interesting river crossings en-route. The rest of us along with all the gear (except for about 10% of the food in the form of a garbage bag of onions, carrots, cauliflower's and pasta.... which mysteriously went missing between Christchurch and our camp) arrived via three loads in a local helicopter that we hired. From the air the whole region is amazing, many, many square kilometre's of rugged alpine karst field (which was hopefully not littered by an accidental food drop?)

Jeff Butt de-rigging pitch 4 "Techno"

The expedition (benefiting from good organisation and the experience gained the previous year) was very well set up; we had a large communal food storage/cooking tent (which had been strengthened to attempt to cope with the winds better than the previous year), a mountain radio (to let us get the evening weather forecasts), a Mac laptop equipped with "*Toporobot*" surveying software and gel cells/solar panel (to run the laptop) and bags and bags of food (though for a while we weren't so sure we had enough due to our 10% loss).

Apparently the previous year was 'the driest for 30 years', and so we were to find that much of last years rigging was inadequate for the 'normal' water levels that we encountered. In addition, during the 'last minute' rush down the lower portions of Viceroy last year, the quality of installation and placement of bolts was rather poor (e.g. three-quarters drilled, hanging the rope in the water or over edges etc.) and thus a major task was to re-rig these pitches. In addition, last year only a very rough survey (e.g. using pacing/rope-lengths and a sketching compass) was conducted. This year we decided that right from the outset we'd do the job properly, rigging the cave well and safely, and would also survey the cave to Grade 5 standard as we went.

Roger Taylor in the horizontal section of the main streamway

Dale, Paul and initially Andras concentrated on looking for/at resurgences down on the Fyfe. Unfortunately Andras then spent much of his time on Mt. Owen ill; on the first night his saying that "washing your dishes is bad karma" seemed to backfire on him and he spent a lot of time folding squares of paper. Dale and Paul assisted Andras off the mountain, this proved to be somewhat epic. On the first attempt via the tops and Bulmer Lake, poor visibility on the tops resulted in the team becoming disoriented and Paul sustained a fall and badly gashed his hand. Dale's GPS allowed them to safely return to camp about 6 hours after they left (much to the surprise of the rest of us!). The second attempt was successful, via Branch Creek but was a very long slog down the Fyfe River for them. The timing and weather was such that Paul and Dale didn't return to camp. As a result we were somewhat short of caver power and it ended up that Roger, John, Mike, Eric and Jeff were the backbone of the Viceroy caving/surveying effort.

Out of the potential 14 caving days, caving happened on 11 days, with 38 caver days spent in Viceroy. Most caving trips were in the 7 to 10 hour range; we deliberately tried not to have late trips, lest they impact on caving the next day. The biggest impediment to caving was the rain and wind. In a nutshell, if the sun came out in the morning you could get your thermals dry and then going caving was not a problem. However, if that didn't happen, then the enthusiasm for going caving just wasn't there; starting out with wet gear for a wet trip didn't make any sense.

Because of the rain, there were several lay days, which were usefully used drafting the survey, learning the intricacies of *Toporobot*, making repairs and eating. Due to the very soggy conditions gumboots (which incidentally are about twice as expensive in NZ) were the order of the day around camp and in the kitchen tent, until it was paved with stone. Some people had to contend with leaking tents and we all had to put up with the seemingly incessant strong winds which were both sleep disturbing and played havoc with the large kitchen tent and some of the lighter personal tents.

Underground we were diligent at keeping the survey up with the rigging; this meant that we could monitor our progress on the laptop as we went. On days when we had 4 or 5 starters, a rigging team would head in first, with a surveying team following. By the time the surveyors had caught up the riggers were on the way out, and then the surveyors would take over the rigging for a bit. As the cave got deeper, trips were often just with 2 or 3 doing the rigging and surveying. It was very much a team effort.

Roger Taylor descending pitch 7

Progress was rapid down the cave to the Fossil series (base of pitch 7). A natty tyrolean was used on pitch 6 to keep one out of the worst of the water. At the end of trip 3 we had surveyed 800m of passage and were down to 287m depth.

On trip 5, exploration of the fossil series allowed us to find pitches 8a, 8b and 9a; with pitches 8b and 9a becoming the main route down as they avoided all the water and a small wet climb associated with pitch 8 and 9. The original route down through the "Royal Ballroom" was way too wet to use, and so trip 6 was well spent establishing an alternative and dry route around the left hand side of this large chamber (pitches 12a, 13a and 14a). Also, on trip 6, a tyrolean was installed on pitch 15 (the "Monarch"), the largest pitch in the cave (22m); this worked very well.

On trip 7, an ineffective tyrolean on pitch 16 was replaced with a couple of deviations; even with these, this was the wettest and windiest part of the cave. Pitches 17 and 18 were also rigged getting us down to 392m.

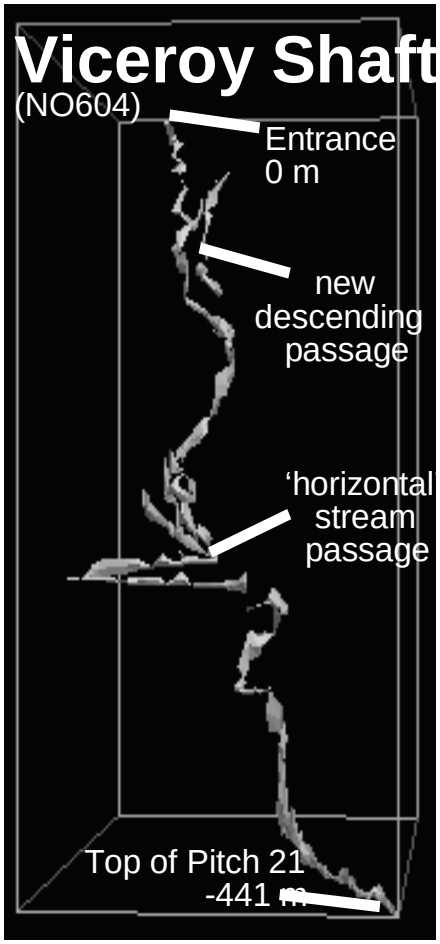
Trip 8 saw us pass into new ground, with pitches 19 and 20 rigged. Below pitch 20 a series of lovely cascades led us into a narrow passage with pooled water. This passage narrowed further to become a rift about 15-20cm wide, which widened to a crawlable width at the bottom in the water. At a depth of 429m Viceroy was taking a turn for the worse! From the bottom of Viceroy to the top of the hill before camp was a 600m climb; trips to the bottom and back were quite a physical undertaking, especially when done day after day!

Jeff surveying

On trip 9 the wetness was braved and a series of crawls and bridging over pools led to the brink of pitch 21 (~ 5m); this was the end of exploration at a depth of 441m. The derig and gear carry was commenced. Back at camp, the marauding possums (we were about 2km from the nearest tree!) and mice were becoming more brazen with their assaults on the camp kitchen. One definitely needs vermin proof food containerisation...and claw proof tents, the kitchen tent was somewhat shredded by the synergism between claws and wind.

Trip 10 saw the main derig and gear carry completed. On trip 11 the final derig was completed, as well as tidying up the survey by surveying some 'minor' side-passages. As often happens, just when you think you're finishing off the job, you find more and more. This is exactly what happened, some inquisitiveness led to discovering new ascending passages, which intersected another descending stream-passage. This was followed down over several climbs and surveyed to the brink of another pitch after about 100m of steeply descending passage. This passage crosses over the main Viceroy stream-passage; it may re-join down below, but only the next trip will tell! I guess it's always good to have something for next time!

We were lucky in having a fine day to pack up camp, and even luckier to have the wind drop enough for the helicopter to come back to collect our gear. After about four failed attempts, our pilot, Syd just managed to lift off by waiting for a wind gust hit from the right direction! We enjoyed a walk out on a fine day over the skyline to Bulmer Lake (where we chatted with the Czech. cavers who were working on Bohemia and caves above) and then on back to the Owen River.



'Toporobot' perspective of Viceroy

So, Viceroy now stands at 441m deep, has a surveyed length of 1577m and still goes. According to the NZSS web site 'Longest and Deepest Lists', Viceroy currently fits in as the 7th deepest cave in New Zealand. Roger is currently drafting up the survey, and this will probably appear in a *Nargun* or *Australian Caver* in the near future. I'm not sure when the next expedition will occur, but it was a great experience and excellent caving. I had some 70 hours down Viceroy and can't say I ever got bored with it. If you get the chance to participate then I'd recommend it. Thanks to the Victorian team for inviting me along, and for doing all the hard organisational work.

(Photos by Roger Taylor and Jeff Butt)

Exploring Wolf Hole at Hastings

By Tim Anderson

Wolf Hole being a favourite of mine because it has such a classic entrance, I often take students in small groups to explore the area. Mistakenly thinking that many of the spots we have visited over the last few years have already been seen before I have neglected to write the details of all of our discoveries. I hope that this trip report will address that omission.

The latest discovery is a new lake on the far side of Lake Pluto. It required a modicum of digging to get to but our efforts were well rewarded with the sight of a largish lake and many promising leads beyond. The new lake is called Lake Charon, (a satellite of the planet Pluto). To find it, one needs to cross Pluto at the fartherest end and turn left where the track splits. Turn right about ten meters from there and follow an obvious flowstone path to its natural end. There you will see the diggings on the left (a smallish squeeze) that will take you through to Lake Charon. PLEASE be careful of the formations in this area...I am concerned that fanning out here will damage the area. My preference is for a tube to be used to float across the lake rather than walking around the right hand side, where there are many fragile formations. Be warned that the water on the left is over head height, so walking the left is not really an option.

Discovering new things is exciting and I can understand that others want to share in the process. While not having any particular 'ownership' problems with the new area, I would ask that any further exploration be limited to properly conducted survey trips and that special attention is paid to blazing the least damaging path. Two other people have already been into the area and have 'discovered' some promising leads, so there is some good potential there.

As a courtesy to my students I would ask that any further trip leaders invite one of then along to share in the exploration. They may very well not be able to go, but would undoubtedly appreciate the gesture. They can be contacted through me on 6223 2000 (wk.)

A few years ago, some other students and I took SRT gear into Wolf Hole to explore some of the pitches that are around the main tunnel and path. At least one of these leads down in to a streamway which we followed for 150m before I got concerned about their safety and decided we should turn back. For interested parties, the pitch is found at the obvious left hand pathway in the main cave section just below the entrance and is slightly hidden by a pillar and some smaller formations. Pitch length is about 22m and the rope is useful for descending the last few metres into the streamway. Worth having a look I suspect, especially given our low rainfall at present. Not a good place to get caught in the wet however...

Trust that this is of some use. Happy exploring. ♦ ♦ ♦

An April Fool's Day Trip to Splash Pot: 1/4/2000

Party: Dave Rasch, Jol Desmarchelier, Phil Rowsell By Phil Rowsell

Splash Pot: I had heard big things about this place; recently extended; contains a nasty tight section called "Close to the bone" and has a 'Harrowing' final pitch of around 105 m (pretty big for a Pommy caver)! Jeff Butt had taken me on a few warm up trips and now I had the chance to do something more serious. The brain was buzzing with excitement when Dave and Jol came to pick me up. The only potential problem was it was 1st April so I was on guard for some Tom Foolery. Maybe we weren't going caving at all but just heading down to the beach to chill out and drink coffee?? My fears proved unfounded and the drive up to the Florentine Valley was pretty uneventful until we headed down the forest tracks. The way on was blocked by logging machinery. Bugger - April fool!! After some lengthy negotiation, Dave thankfully managed to persuade the guys to allow us through.

We had arrived. I pulled out my new fury (undersuit) and trog suit (which I spent the last 5 days frantically sewing) and got changed. At least I should be warm in this, but wondered whether the ravages of "Close to the bone" would leave it in tatters. The indications were positive as I nearly cooked wandering up the track clambering over logs etc., a far cry from the barren Yorkshire Moors. Eventually we reached the cave entrance, no stopping now. Here we go!

I remember feeling a bit nervous heading down the first pitch not knowing quite what to expect. We headed on in, passed the memorable chock stone and along a typical meandering stream rift passage before popping out at the first serious of pitches. Pretty straight forward drops, but just enough water flowing down to give you a soaking. The boys were saying that there was a lot more water than normal. So much for my waterproof Trog suit, it was more like a sponge! Why the hell had I left my TSA (PVC) trog-suit back in the UK!! Still couldn't do much about it now.

Now for "*Close to the Bone*". A nice narrow stream rift passage, just what under nourished midgets thrive on! More awkward than tight with packs, arms and legs snagging etc. It really reminded me of caving in Britain. We slowly battled our way along and arrived at the top of the 2nd pitch series, no problems. I headed on down to the first rebelay and changed over. I was surprised when I couldn't lock of my stop. Jesus that's tight on rope, will be interesting on the way up. Carried on down and only had just enough slack to get the stop off! Definitely going to be interesting coming out. Dave and Jol didn't seem too worried - I guess I was just being a Whinging Pom!

The passage continued on through a few low wet crawls and I was pleased to see the water disappear down a rift, and a dry passage head on. I might get the chance to warm up now! The next section was really nice; lots of straws etc. some with a pretty red staining. You had to be really careful in places, as you were squeezing / crawling through narrow passage past these decorations with literally inches to spare. It made me feel pretty sad about British caving as many of these would have be smashed out the way in the initial exploration. After a while the straws disappeared allowing easy progress to a short pitch and down to the streamway again. It wasn't far along before we were at the head of the big pitch "*Harrow The Marrow*". Ha ha, Awesome!

I was the only one going down, on a mission from Jeff (armed with an 80m poly-pro string and the 30m survey tape) to accurately measure the length of the big bitch (Freudian slip). Dave and Jol were whimping out, claiming exemption status having been down last time. No probs - slack Oz cavers!!. A bit of jiggery-pokery and I was soon hung out over the pitch. I felt a bit freaked looking out at the drop and this 9mm string I was hanging off. I was even more horrified looking down to see water shooting out over the rope. S*** - this was meant to be dry! It was going to be pretty grim jugging back up through this. Flashes of my nightmare one time in Vespers, jugging out through torrential melt water raced through the brain didn't make the prospect any better! Lots of moaning followed; I only got the sympathetic reply of "Get on with it you Whinging Pom". Oh well, I guess I can always go down and have a look-see. It turned out not to be as bad as I initially thought, just a continual heavy rain. It did nothing for visibility though, just enough to see the splendid airiness of the pitch! Down and down I went, finally touched down on the floor.

Wow, man this is big, the survey tape didn't reach the floor. It was a meter off! ["*Harrow the Marrow*" is now measured at 111m from the pair of bolts to the deck; or 113m from where the waterfall shoots over the lip.] I got out of the rain and had a quick explore. I followed the stream down to a low crawl but bailed out as I didn't want to push anything, being on my own and knew the previous trip had pushed

this. I was pretty cold now so I decided to head back up. The tape turned out to be a real bonus, as it gave me a real nice indication as to how far I'd gone. It would have been pretty demoralising otherwise, looking up at the rain not knowing how far you'd got to go. Finally with about 20m to go, I broke out of the rain and could see the pitch head - bargain. Got to the top pretty shagged, pleased but cold.

Dave and Jol appeared after a bit of exploring, and told me to wander about a bit while they went surveying. I broke open a Snickers packet and quaffed down three. Felt a lot better after that. Refuelled! I went and found the boys and helped survey for about 2 hours around the passages, they had explored earlier. A few leads were pushed, but none went. May be next time? It was now 18:30, so time to call it quits and head out. I had only just started heading out and my battery went, major bummer. No hassle. Got the Duo out only to find the main on that had gone too! Not my day!! At least the pilot was going.

I felt pretty bushed on the way out, but thankfully it wasn't the cave you could motor out, just a slow battle. I had a real epic on the short rebelay on the 2nd pitch series. The pom was in full whinge mode now, curing and swearing in full UK style! A couple of tired strong-arm manoeuvres alleviated the problem and I eventually emerged at the top of the pitch series wasted. Luckily "*Close to the Bone*" seemed to spark some life back into me and it didn't seem that long before I was stood at the entrance of the cave at 21:30. Pretty wasted, but buzzed with the satisfaction of a pretty good trip.

Now for the last laugh, the Splash Pot to New Norfolk Pizza handicap race. We were doing pretty well to start; down to the car and changed for 22:00. We raced on down the forestry tracks, round a bend and was confronted by two logging trucks blocking the road. Nightmare! No chance of squeezing around these while they were being loaded. No option but to wait. We sat there for an hour while one of the trucks was loaded dreaming of pizza. The guys thankfully took pity on us and let us pass after the first had been loaded. Some frantic rally driving from Jol got us screeching to a halt at the pizza place at 23:55. We raced into the shop only to be told " Sorry guy's we're shut" Bugger! A final April fools day twist I guess.

A great trip must be done again.

♦ ♦ ♦

CAVEX 2000: 15-16/4/2000

By Jeff Butt

About forty-something people from several Tasmanian organisations took part... approximate numbers from each organisation are indicated below (but names have been omitted for brevity, and because I don't know all of them!): Tasmania Police (12), Tasmanian Ambulance Service (1), Tasmania State Emergency Service (12), Parks and Wildlife Service (2), Southern Tasmanian Caverneers(16).

One of the main aims of this CAVEX was to have Rescue Practice.... last year there was plenty of Search Practice and feedback received was that people wanted more Rescue Practice. We were fortunate to have a Tasmanian Ambulance person come along (Neil Smith), so patient care was to be a priority, i.e. we not only wanted to extract the injured person from the cave, but wanted to do this as carefully as possible.

Damian Bidgood (Police/STC) and myself set up the exercise and chose the accident site to be in the back end of *Mystery Creek Cave*, in one of the more difficult areas of the cave; access to the area involved several short climbs, crossing a tricky rift and a pitch of about 15 m. Once out of this area there was plenty of 'rough terrain' to be covered and several other short rope-work problems would need to be solved to get the 'package', aka Justin Bidgood (Police) out of the cave. Once these obstacles were overcome, there was still an underground stretcher carry of around five hundred metres to the surface, with some narrow passage, talus and short climbs to ensure that it wasn't just an easy carry. Mystery Creek cave had the added advantage of being spacious enough to allow 3dozen cavers in it without having too much of an impact upon the cave and there would be useful jobs for rescuers of all experience levels.

About two weeks prior to CAVEX, a hauling video was viewed at SAR HQ and people played at setting up hauling systems. In addition, on April 12th a practise haul was held at Fruehauf Quarry. So, everyone had been re-introduced to hauling systems and had gained some first hand experience prior to 'doing it for real'.

Narrative of the events

John Cherry (Police) scored the job as the Exercise commander. Initially, details to hand indicated that two cavers staying at the local Youth Hostel had not returned from a caving trip to *Mystery Creek Cave,* and thus an alarm was raised. Thus John initially had to organise a search to locate the missing parties. Before the Search was too far along the track, one of the missing parties had made it to the road-head and reported that an accident had occurred; thus the problem moved from a Search to a Rescue. Paul Steane (Police) was appointed as the underground controller.

The SES-RHU set up the mobile command centre at the start of the walking track to Mystery Creek Cave; whilst the Police Radio Technician set up a comms. station near the entrance to the Cave.

Search parties were re-mobilised to Rescue parties, and Arthur Clarke (STC) was called upon to come up with a 'mud-map' of the back end of *Mystery Creek Cave* (nothing much more than mud-maps exist for this area).

Neil Smith (Ambulance Service) went with the first response caving team to attend to the victim. One member of this team laid flagging tape along the route to facilitate other groups getting to the correct place. Whilst the victim was being attended to, a phone line was laid into the cave to near the accident site. Other caving teams were given the job of ferrying in equipment that would be needed in case of a stretcher evacuation being required.

The first response team attended the conscious but cold victim (who had taken a fall, breaking a lower leg, an arm and sustaining a bang to the head). Justin's injuries were treated and he was packaged up into the Paraguard Stretcher in a sleeping bag and fitted with face-shield helmet. Paul made an assessment that the extraction was estimated to take 8 hours. John was informed of this and managed personnel on this time frame.

Moving the casualty towards a lowering point; ***photo by Arthur Clarke.***

Several routes were available out of the maze of rifts at the accident site; a better exit route than the access route was identified, and a counter-balance haul was used to haul Justin and Neil up a 15m pitch. The area was well endowed with natural anchors, although these weren't ideal for raising the package above the pitch-lip, and thus it did take around an hour to get both up and off this pitch. [The use of bolts placed in more convenient spots (e.g. above the pitch-head) would have eliminated this problem, but for the exercise no-bolts were to be placed.]

Whilst the first haul was happening, other rescue teams were given the task of rigging the different obstacles that had to be overcome en-route out of the cave. By the time the stretcher reached each obstacle, some sort of system (e.g. traverse line, belay line, lowering system) was in place and the team leader explained how each system was to be used. This system worked quite well; there was only minimal time spent waiting for rigging to be installed. Once the victim was past the obstacle the team derigged the gear and moved it forward.

The many available hands made the job much easier; there was always someone to pass the stretcher too and no one person was called on to bear too much of the burden.

Some quite novel techniques were used to negotiate various obstacles. There were several narrow keyhole type rifts to be traversed. Movement of the stretcher through these regions was facilitated by having two short lines going up to rescuers on a higher bench so that they could take some of the load, as it was not physically possible for many people to be at the stretcher itself. For one of the hauls, a mobile pulley system was used to good avail to allow a haul up an inclined route.

In the horizontal passages, keeping spare rescuers ahead of the stretcher was a full-time job. The cave was quite a spectacle, with some 3dozen caving lights bobbing around. Richard MacMillan (Police) took some still photos and some video footage; it is hoped that some of this video footage might make it as an mpeg file to our web-site. Arthur Clarke took many digital photographs throughout the rescue as well, one of which appears above.

Once Justin was through the difficult terrain the extraction was virtually over, but everyone was keen to complete the rescue, and thus Justin was conveyed right to the entrance; arriving there about 7 p.m. (on the 15th), thus the total extraction time was about 6 hours.

A debrief was held at the road-head; nearly all comments were positive and the general feeling was that it was a very smooth and reasonably well co-ordinated rescue. Some improvements were suggested and these will be taken on board. Overall Neil was quite happy with the level of care the patient received; although in a real situation more care would

be required...having a person in pain and responding to rough treatment would no doubt illicit more careful handling. One lower was done with the stretcher oriented vertically, in a real situation this orientation wouldn't have been desirable for medical reasons.

Many thanks to Justin for taking the six hours trussed up in the stretcher and some occasional rough treatment so well. Many thanks to everyone else for coming along and participating. It is hoped that everyone gained some benefit from the experience and received sufficient practice of an actual Rescue.

The next morning, there was a small demonstration of the different types of bolts available for use in a rescue (e.g. self drilling spits placed by hand or with a power drill, Ramset bolts supplied by the Police and sleeve / wedge bolts). To gain a feel for the reliability of these types of bolts some non-qualitative destructive testing was performed with 80kg chunks of rocks being lobbed off a quarry bench to give the various bolts something like a 1.2 fall-factor. These tests were rather severe; the severity being indicated by the bolts failing on either the first or second fall. I guess two important lessons that come from this little demonstration are first, to rig well (good rigging means that any one anchor failure never generates more than about an 0.3 fall factor on any of the other anchors). Secondly, always use a minimum of two bolts or possibly a minimum of three bolts when hauling a stretcher and "barrow" boy).

Many thanks are forwarded to everyone who came along and participated over the weekend. Special thanks to the Police for putting on the BBQ on Saturday night. ♦♦♦

The Limestone Quarrying Proposal in the Mt. Cripps Karst area of NW Tasmania

By Arthur Clarke

Prior to the Tasmanian Regional Forest Agreement (RFA), the Mt. Cripps karst area was considered as a Recommended Area for Protection (RAP) by Forestry Tasmania. Although most of the forested karst lies in an area leased to North Forests, this timber company deliberately avoided logging activity in the limestone area or its karst. The RFA process concentrated on aspects of biodiversity and tall growth forests, rather than geo-conservation values such as karst. During the RFA, most of the Mt. Cripps area was dealt with under the system for Comprehensive and Representative (CAR) reserves. Although final land tenure has not been declared for the Mt. Cripps area, the karst now mostly falls into two tenure categories: as a Conservation Area in the north and as part of the Reynolds Falls Nature Recreation Area in the south, with a small section of unallocated land as State Forest, west of the *Southwell River*. Tasmanian Govt. legislation permits mineral exploration and mining in all these tenures.

In early to mid-1999, Ken Grimes – who runs a limestone geology/ karst consultancy business in western Victoria – was contracted by a "new" Burnie-based company (Western Metals) to perform a karst assessment report in the Mt. Cripps area. Little was known about Western Metals: a mining company with Head Office in Perth (W.A.), that now owned the lead/zinc Hellyer Mine operation, beside the *Southwell River,* little more than a kilometre NNW of known caves in the Mt. Cripps karst area (see Figure 1). Western Metals appears to be a rapidly expanding mining company that recently acquired the Hellyer Mine when it bought out Aberfoyle Ltd. in 1998, (also acquiring two copper mines at Mt. Gordon in NW Queensland).

Ken Grimes had been asked by Western Metals to document the cave and karst features of the area and assess the environmental impact of three potential limestone quarry sites in this Mt. Cripps karst of NW Tasmania. The mining company had already rejected a fourth potential quarry site, located west of a northern arm in the "new" *Lake Mackintosh* formed by the drowned lower reaches of the *Southwell River*. Western Metals considered this fourth site to be unsuitable due to potential visibility of road works and quarrying from Mt. Romulus to the south and the Cradle Mtn./ Barn Bluff region in the WHA to the east. Members of the Savage River Caving Club (SRCC) assisted Ken Grimes with his study of the Mt. Cripps area, guiding him to cave sites and karst features (Heap, 1999). The final consultancy report by Grimes was presented to Western Metals in August 1999. Despite being promised a copy of the 30page Grimes report, together with appendixes of alternate carbonate rock areas in NW Tasmania, SRCC did not seen his report till late February this year.

Then surprise… surprise: a newspaper advertisement. On February 10th this year – in only one newspaper: the NW Tasmanian-based: "*The Advocate*", there appeared a notice on page 43 – inserted by Mineral Resources of Tasmania (Clarke, 2000). Using a W.A. address, Western Metals Resources Limited sought an exploration license (EL: 17/99) for a 29km² area at Mt. Cripps, in the land districts of Russell and Lincoln. The EL application states "*principal commodity sought: Limestone*" with the license being for "*Category 1 and Category 3 minerals (i.e., Industrial and Construction Minerals)*".

Subsequent investigations revealed that the Hellyer Mine was about to be closed, but Western Metals was interested in continuing operations for at least another ten years by extracting heavy minerals from the mine tailings. The Western Australian (W.A.) exploration division of this company is now in a joint venture with another W.A. company (Dominion Mines); the latter company are currently conducting the feasibility study into the extraction method. The companies require high-grade limestone to neutralise the leaching (acidification) process resulting from oxidation of pyrite in the Hellyer Mine tailings: a process that assists in the mobilisation of heavy minerals, such as gold, silver and residual zinc. (Pyrite minerals are sulphides; oxidation converts sulphides into sulphates; hydrolysis of sulphates leads to production of sulphuric acid.) Preliminary assessment of the mine tailings indicates the presence of about 1 million ounces of gold effectively making the tailings dump an "ore body"

in itself. After treatment with the limestone, it is proposed that the leached sludge residue will be treated using a cyanide process to separate the gold. Approximately 2 million tonnes of high-grade limestone is being sought over a ten-year period – the estimated time required to extract all the heavy metals.

The 29km² area in the EL application area advertised in *The Advocate* encompasses about 7/8^{ths} of the Mt. Cripps limestone (see Figure 1) – covering the areas west of the *Mackintosh Creek* and the *Vale River* and north of *Lake Mackintosh*. The remaining small portion of limestone not included in the EL application area lies immediately west of the *Vale River*, forming part of the major component of the significant polygonal karst development described by Shannon *et. al*. (1991) and Heap, (1999). However, the northern and NW parts of this polygonal karst, along with other areas of known karst and caves (see Figure 1) are included within the 29km² application area to explore for limestone mining (quarry) sites.

Four objections to the limestone exploration (mining) license were lodged with the Tasmanian Dept. of Mines – a body now known as Mineral Resources Tasmania (MRT). All these objections were lodged on or before the due date: March 10th 2000. The Australian Speleological Federation (ASF), Southern Tasmanian Caverneers STC, SRCC and the North West [Tasmania] Walking Club – all lodged objections. The latter group based its objection on concerns for loss of forest values, potential destruction of flora and fauna species and visual degradation of the landscape. The other objectors (ASF, SRCC and STC) detailed the various significant aspects of the known karst and its attributes within this myrtle-dominant rainforest: the cave fauna, sub-fossil deposits in caves and archaeological values. In addition, it is believed that at least one other Tasmanian Govt. department lodged a submission to MRT with comments regarding the karst significance and natural forest values, as well as concerns for the extensive size of the EL area being requested by Western Metals.

All the EL objections have more or less said "NO" to limestone mining (and further exploration for potential quarry sites) in the Mt. Cripps karst, pointing out the significance of features within the predominantly known area of cavernous limestone. The caving groups suggested that the limestone be sought other supply sources, including the existing quarry operations at Railton and Mole Creek and/or by investigation of other known areas of high-grade, probably non-cavernous limestone or dolomite. In a description of the area, the SRCC objection mentioned that cavers were aware of comparatively few karst values in the area of massive limestone, now isolated on the western shore of *Lake Mackintosh*, (largely due to its remoteness from the rest of the karst area and difficulty of access for cavers). However, SRCC stated this western outcrop was in the vicinity of a recorded aboriginal site: "LM90/2" (Stern & Marshall, 1993) and that a full impact study and karst assessment should be undertaken prior to exploration for limestone mining sites.

During his study of the impacts of quarry sites in the Mt. Cripps karst, Ken Grimes did not investigate this western area of limestone, following the brief given to him by Western Metals, who stated that an assessment was not required on the basis of environmental concerns due to site visibility from within the WHA and other areas. In his report, Grimes records SRCC mention of a few small caves and sinkholes in this western area and based on air photo interpretation, he also reports possible large dolines and a possible small area of polygonal karst. Although not assessed "on the ground", Grimes recommended that this western area (with *Site D*) be reconsidered as a potential limestone quarry site, because it was deemed to have less impact on the known and documented karst systems at Mt. Cripps than the three other potential quarry sites. In his consultancy report, Grimes detailed the implications of karst and likely impacts at three alternate quarry sites being proposed by Western Metals, before they applied for their EL. Two quarry sites (*Site A* and *Site B*) were proposed near *Caverneer Creek*, along with a third *Site C* located near the junction headwaters of *Mackintosh Creek* (Grimes, 1999). Despite not being studied by Grimes, the area west of *Lake Mackintosh* including *Site D* was still incorporated as part of the 29km² area in the EL application for Western Metals, as advertised by MRT.

In addition to the four EL objections lodged with MRT, a number of other individual submissions were forwarded, either direct to the company (Western Metals) or to MRT. Some of these were apparently received after March 10th, the due date for lodgement of objections. Amongst the late submissions, there was a detailed geological report by Henry Shannon, describing the conservation priorities for the Mt. Cripps karst (Shannon, 2000). Based on the known geology and karst development (Shannon, et. al., 1991), Shannon divided the Mt. Cripps karst area into four component parts and described the impact of possible limestone mining in any of the four areas. He relates to possible limestone mining in three parts of the Mt. Cripps area, by comparing the effects of mining in the karst to the human body: like taking the hand, arm or core body trunk of the karst, depending where mining is undertaken. Shannon describes a fourth area within the EL lying closest to the Hellyer Mine tailings dump as *Area 1*: a flat-lying region with small isolated hills of limestone situated west of the *Southwell River*, including the limestone further south, west of *Lake Mackintosh* (which includes *Site D* in Grimes). In similarity to the Grimes report, Shannon states, "…*since this* [western area 1] *is off the margin of good karst, it is much the preferred area of quarrying from the cavers' point of view*…"(Shannon, 2000).

Shannon also suggested another site in the southern section of this western area of the EL, forwarding the novel idea of lowering the *Lake Mackintosh* impoundment to quarry limestone from the lake floor bottom. Lowering the lake would enable the removal of dead "eyesore" trees and allow limestone quarrying to go ahead (on the present lake floor), with the lake being back-filled after the quarry has been completed (Shannon, 2000). Since the lake is still used for generating hydroelectric power and very low levels have been recorded due to our extended

Tasmanian drought (recently 17-18m below normal lake level), it seems unlikely that the "powers to be" [no pun intended] will agree to any request to further lower the lake level to permit limestone quarrying on the lake floor.

According to the new (1995) *Mineral Resources Development Act of Tasmania*, all objections to an EL or mining license are taken to a Full Bench of the Mining Tribunal in Tasmania. However, the four appellants who lodged objections to the EL received notices from the Registrar of Mines advising that an "*informal meeting*" was being convened in Burnie on June 1st between Western Metals, MRT and the EL objectors - with the Registrar (Dennis Burgess) acting as mediator. Henry Shannon was also invited to participate in the mediation process, despite his submission being received out of time. The MRT letter stated that the mediation session was arranged so the applicant (Western Metals) could "…*discuss your concerns and provide an opportunity for the applicant to provide further details on the proposed work program and exploration activities*." It seemed odd that the Registrar of Mines was acting as mediator, but according to Dennis Burgess, this form of "settlement" procedure with the Registrar acting as the mediator had been pre-determined and gazetted under auspices of Section 130 in this new Act of Parliament. (Although there is no direct reference to the mediation process, Section 130 of the Act

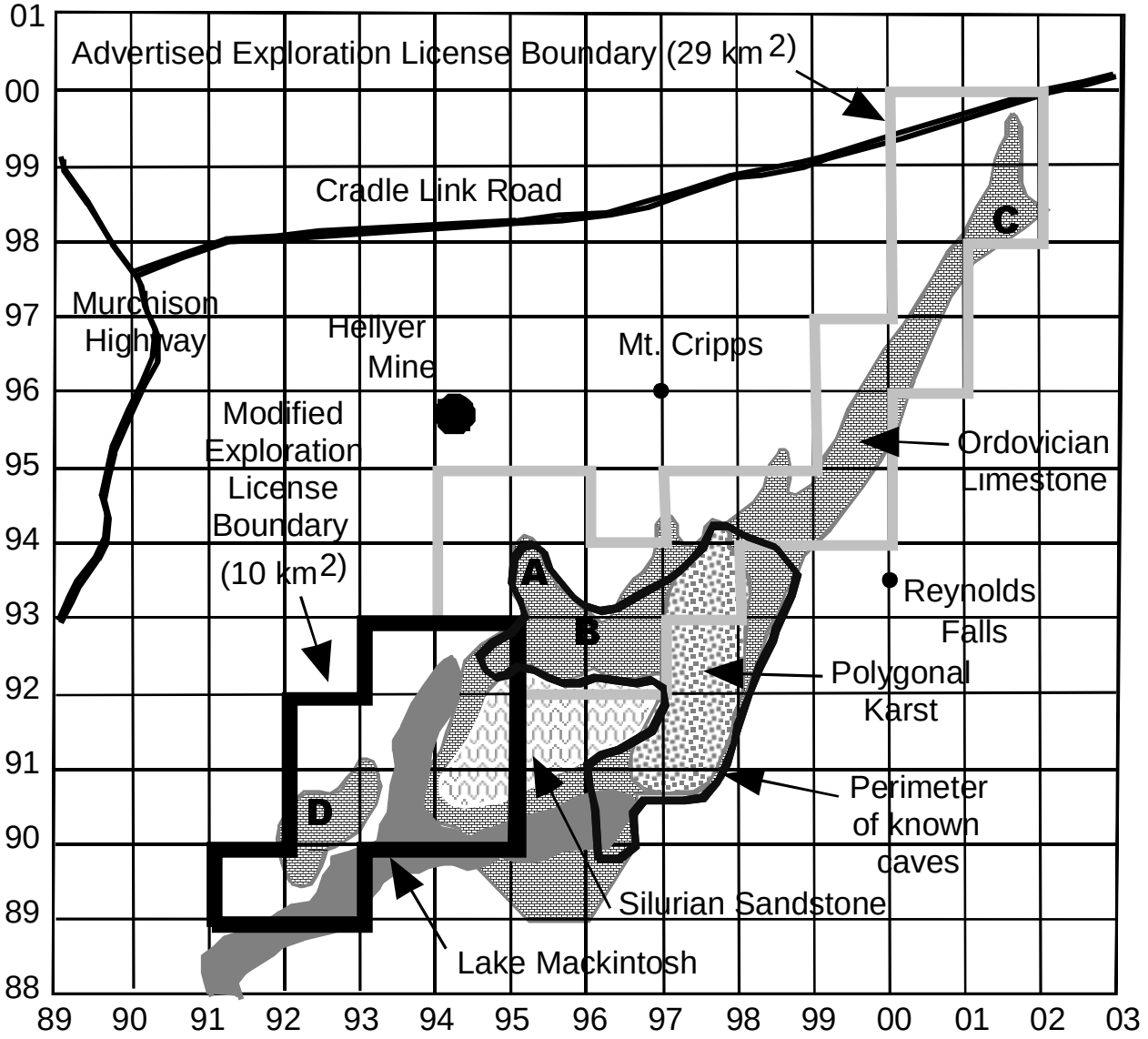


Figure 1: Diagrammatic map showing extent of the 29km² Western Metals Exploration License (EL) area: 17/99, in the Mt. Cripps karst area of NW Tasmania, as advertised in February this year. Potential quarry sites (A, B, C & D) are shown. The area in bold represents the recently amended 10km² EL area now proposed following discussions with MRT and Western Metals in Burnie on June 1st 2000. The new amended area encompasses the limestone area with quarry Site D, west of the northern arm of *Lake Mackintosh* (depicted at maximum capacity level of 229.6m) and a narrow band of limestone, immediately east of the lake - west of the area shown as Silurian sandstone. (Map based on TASMAP Sophia 1:100,000sheet with MRT advertised EL boundaries superimposed on geology from the Western Metals planning map.) **[Diagram prepared by Jeff Butt, June 2000.]**

requires that the Director of Mines is to attempt to resolve any lodged claims or appeals.) According to the Registrar, if mediation does not successfully resolve the "dispute" between appellants and the mining company, the issue is then forwarded to the Mining Tribunal, where a more legalistic approach is undertaken.

The mediation hearing with Western Metals took place in the River Road offices of Western Metals at Wivenhoe (near Burnie) at 4pm on Thursday June 1st 2000. The MRT Registrar (Dennis Burgess) introduced the parties - present were: Fred Dutton and Frank Salt (for SRCC); Arthur Clarke (for STC and ASF); and Mark Alexander (North West Walking Club). The Hellyer Mine manager (Greg Marshall) represented Western Metals. The Government officials in attendance included John Pemberton (Senior Geologist, MRT), David Gatehouse (Environmental Field Officer, MRT), Dennis Burgess (Registrar of Mines, MRT) and Ian Houshold (Geomorphologist and karst expert, DPIWE). Burgess explained the reasons for the meeting, stating that it was often difficult to establish "*legal standing*" at more formal hearings such as the Mining Tribunal, so this mediation process provided a means for us "…*to get our day in this process*…" and enabled the Registrar to report back to the Tribunal or Minister for Mines in order to provide background of the "standing" of appellants.

The joint venture companies require high-grade limestone with 90% $CaCO_3$ for their tailings "leaching" process. Western Metals venture partner (Dominion Mines) will spend $5million before the end of this year to complete a feasibility pilot study of the project, including securing a high-grade limestone source. Approximately 160,000 tonnes of limestone was required per annum in the leaching process expected to last about ten years, employing 100 people with a total capital expenditure of $120million, but the companies will not commit themselves for another 15-18 months although at present there was an 80% surety the project would go ahead.

Burgess (for MRT) stated that the "*Category 3*" mineral status was listed in the advertised EL application by MRT, because there might be some requirement for "crushed rock", further down the track. Although there was some mention that the crushed limestone might be used for road-making purposes, it was unclear whether this was its intended use. There also appeared to be some ambiguity or conflict in the EL boundaries: MRT had advertised a 29km² area for the EL, but the Western Metals planning map showed a lesser area of 26km².

Although there was some discussion on the possibility of sourcing limestone from elsewhere, including the Loongana and Kara (St. Valentines Peak) areas, both MRT and Western Metals made it obvious that their intent was to mine limestone from the Mt. Cripps area – located "…*at their doorstep*". However, it was agreed that the DPIWE geomorphologist (Ian Houshold) would prepare a list of suitable alternate sources of limestone. The possible use of the Hellyer Mine railhead to transport limestone from the established quarry at Railton was dismissed as being too expensive and as being a source material that was beyond their direct control. Western Metals stated that the cost of providing limestone to the processing site at Hellyer Mine was considered to be the major cost factor in their new project.

Despite opposition from Arthur Clarke, the ensuing discussion centred on sourcing the 90% $CaCO_3$ from within the high-grade (Mt. Cripps) limestone area. SRCC reiterated the known values of the eastern portion of the karst including the polygonal karst area described by Grimes as a "*giant egg carton*" and acknowledged by Western Metals as unfeasible to mine due to the likelihood of loosing their ground breaking heavy machinery. Concern was also expressed about a mine site in the upper *Mackintosh Creek* area, particularly because of downstream hydrological pollution from the mine site. (SRCC members have commented on the existing turbidity and mine tailings water already present in the *Southwell River*, downstream from the Hellyer Mine.) Speaking for SRCC, Fred Dutton stated that if the three potential quarry sites examined by Grimes: sites A, B and C, were eliminated from the EL area, this would meet the immediate concerns for SRCC. Speaking personally, Dutton stated that he did not know of any caves in the vicinity of site D west of *Lake Mackintosh*, so he believed this would be considered a less important area by SRCC. Both MRT and Western Metals stated that Grimes had also approved this western area during his assessment, though Clarke stated Grimes had deliberately not carried out on-ground studies in this area. The suggestion of quarrying this western area was also supported by Henry Shannon who described an additional area of limestone with quarrying potential, located west of the *Southwell River*, outside the EL - just west of Gridline 94E and north of 93N, an area described by Pemberton as possibly part of a Pasminco lease (EL/98?). Shannon reiterated his concept of limestone quarrying on the floor of *Lake Mackintosh*, but there was no interest or support for his suggestion.

MRT immediately proceeded to declare that this western area would form the basis of a revised EL application and Western Metals stated that they would downsize their requirement to a 10km² area, deleting the area east of Gridline 95E and north of 93N (see figure 1). Both Clarke (for ASF) and Alexander (for NW Walking Club) expressed opposition to the proposal. Clarke opposed the plan to proceed in the western area on the basis that no preliminary environmental impact assessment had been undertaken; a view also expressed by the SRCC delegate: Frank Salt. Clarke also stated (on behalf of STC) that this western area essentially represented a contiguous western extension to the limestone (and karst) in the east and therefore potentially contained a significant community of invertebrate fauna, similar to the eastern karst. Alexander stated that he believed development works in the southern portion of this area (west of *Lake Mackintosh*) would be visible from both the Mt. Romulus area to the south and Barn Bluff in the WHA to the east. DPIWE spokesman (Houshold) and ASF appellant (Clarke) both suggested that the alternate limestone sources should be investigated first; Clarke stated suggested that the prior assessment of these alternate sources should be incorporated into any conditions for the Western Metals EL.

The MRT Registrar (Burgess) hinted that the objection case against the issue of the whole 29km² area for the EL could be forwarded to Mining Tribunal and we would have to take our chances in this more formal arena of

legalistic proceedings. SRCC made it plain they did not want to take this risk, in the knowledge that the mining company might still be able to knock off the rest of the karst. MRT officials also hinted at the fact that if we went to the Full Bench of Mining Tribunal, we might have to first fight a legalistic battle to establish "*legal standing*". The consequence of this mediation session: MRT proposes to redraft the EL application and forward it to all original appellants for their final approval. Assuming they do not wish to maintain their objections, the EL will be granted, subject to the usual provisions and conditions formulated by the Mineral Resources Working Group: a body of four persons representing the interests of MRT, Parks, Environment and Forestry in Tasmania. The MRT Registrar stated that once the EL is granted, the company holding that license has a prior right to a mining license – issued under guidelines of the Tasmanian Dept. of Environment.

Following is a summary of some concerns:

- MRT appeared to be very evasive on the issue relating to the requirement for "*category 3*" construction minerals, in addition to the "*category 1*" industrial mineral required by Western Metals;
- MRT appeared to show a bias in the mediation by dismissing the company's need to assess alternate limestone sources, although Western Metals agreed to, provided this was not set as a condition of their license;
- The advertised EL 17/99 notice by MRT (in *The Advocate*) and the planning map for EL 17/99 on Western Metals map charts show different sized EL areas: MRT shows a 29km² area, Western Metals shows a 26km² area;
- MRT and Western Metals both implied that in supporting the western area as a potential quarry site, the environmental consultant (Ken Grimes) had already assessed the environmental impact of this western area of limestone. This is contrary to comments in the Grimes report, where it states that the company advised him that the western *Site D* was not a preferred site, so there was no requirement for environment assessment (pp. 2, 10, 11 & 17 in Grimes, 1999);
- The regional geology indicates that this western area of limestone is a contiguous extension of the limestone east and north of the lake, supporting the possibility of an equally rare and threatened cave fauna ecosystem. There should be no reason to believe this western area is not karstified like other unaltered Ordovician limestones in Tasmania, showing evidence of several cycles of karstification – hence the presence of palaeokarst deposits that may also have lead, zinc, copper or iron sulphides associated with them;
- A 10km² EL area still appears excessive for a limestone quarry estimated by Grimes to attain a maximum size of 200m². There was no mention of any awareness of karst values or karst protection/ preservation methods to be deployed in the event of a significant cave being exposed during quarrying;
- The mine tailings treatment process involves the use of cyanide. There was no mention of guarantees to prevent downstream pollution from the mine that could endanger aquatic life in the *Southwell River*, the adjoining karst or downstream *Lake Mackintosh*.

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Khazad-Dum / Splash Pot / Cauldron Pot...Will this be the next big cave system in the Junee-Florentine and deepest cave in Australia?

By Jeff Butt

Over recent times STC has been doing quite a bit of work in the Splash Pot (JF10), Khazad-Dum (JF4, 5 &14) region. Yes, there is more to do too, but maybe it's time for a bit of conjecture based on what we know already.

From recent survey work we know that as at mid May 2000:

- The surveyed/estimated lengths of the following caves are:

Khazad-Dum-Dwarrowdelf-JF5	~2800m	J. Butt (2000)
Splash Pot	~1800	J. Butt (2000a)
Dribblespit Swallet	~350	estimated from R. Eberhard (1989) and J. Butt (2000c)
JF40	162	J. Butt (2000b)
Troll Hole	200	J. Butt (1995)
Cauldron Pot	>1071	S. Nicholas (1989)

- The surveyed depths of the following caves are:

Khazad-Dum-Dwarrowdelf-JF5	285 m	J. Butt (1999)
Splash Pot	306	J. Butt (2000a)
Dribblespit Swallet	166	R. Eberhard (1989)
JF40	40	J. Butt (2000b)
Troll Hole	89	J. Butt (1995)
Cauldron Pot	305	S. Nicholas (1989)

- The survey data shows that the points of closest approach between the caves are:

Khazad-Dum to JF40	40 m
Khazad-Dum to Splash Pot	53 m
Khazad-Dum to Dribblespit Swallet	40 m
Dwarrowdelf to Troll Hole	70 m
Depths of Moria (K.D.) to Cauldron Pot	~ 70 m

The smallness of some of these separation distances suggests that there is considerable potential to join some/any/all of these caves.....if Cauldron is joined to Khazad-Dum, then the current survey data says the prize is the deepest cave in the country with a depth of 383 m! Did this get your attention?

Joining Splash Pot to Khazad-Dum doesn't result in a deeper cave, but the length would be in the 4-5 km range. If Cauldron is added, then 5-6 km is the tally. Join the lot and 6-7 km is the length of the system based on current surveys/estimates.

Sure, this is just conjecture at present, but it is not outside the realms of achievability. For a start here is a list of projects that need to be worked on towards that end:

- Khazad-Dum: Survey the *Depths of Moria*, JF5 and The Wet way.
- Splash Pot: Continue on with the surveying and checking out existing and new leads. Does that big breeze in "*Harrow the Marrow*" join the "Master Cave"???
- Cauldron Pot: Have a look at the upstream end; apparently it's pretty low and wet in this region, but when we have a dry summer (like the 6 months just gone!) the time would be right for a look there.
- Dribblespit Swallet: Return to survey the lower portions and chase the stream that Rolan heard [see R. Eberhard (1989)]. Is this K.D.?

I guess events in the future will see whether any of this conjecture is realised. The potential is there; all one needs to do is to get out there, have a systematic look and the rewards will flow.

References:

J. Butt (1995) *Troll Hole, JF233*. Southern Caver 58, p14.

J. Butt (1999) *Khazad-Dum: Setting the Depth Records Straight, Twenty Seven years on.* Speleo Spiel 314, p9.

J. Butt (2000) *Khazad-Dum...a re-survey.* Speleo Spiel 319.

J. Butt (2000a) *Splash Pot (JF10) 'Mad Englishman and Dogs'*. Speleo Spiel 319.

J. Butt (2000b) *JF40; a piece of the K.D.-Splash Pot puzzle?* Speleo Spiel 319.

J. Butt (2000c) *Dribblespit Swallet (JF13), A small extension.* Speleo Spiel 314, p19.

R. Eberhard (1989) *Dribblespit Swallet (JF13).* Speleo Spiel 247.

S. Nicholas (1989) *A note following "Catching a Cold in Cauldron Pot (JF2)"* by Nick Hume. Speleo Spiel 251.

Track-cutting Through the North Lune Karst to *Mesa Creek* 19/4/2000

Party: Jodie Appleby (New Zealand), Hans Benisch, Robyn Claire, Arthur Clarke, Monty Farrah, Penny Lopez, Shalom Rofe (Israel), Damian Seabourne and Neil Seabourne (plus Andrew Skinner – "in-spirit").

By Arthur Clarke

Our primary aim was to "re-open" and extend the track from Hastings Caves car park to *Mesa Creek*, which had been blocked by tree falls during the severe windstorms of February 1996, along with subsequent growth of Horizontal Scrub. A secondary aim – time, weather and enthusiasm permitting

Route finding along the Mesa Creek track - Penny Lopez (in front), Hans Benisch (with fogged glasses), Monty Farrah (attending to Hedge Trimmer), Jodie and Shalom (in the rear).
Photo by Arthur Clarke.

– was to walk / rock-hop upstream to check out the *Mesa Creek Cave* (NL-6) and *Top Sink* (NL-9) entrances – two unexplored stream swallets above and below the streambed dolines in *Mesa Creek* itself. *Mesa Creek Cave* is quite a significant fissure swallet entrance in a streamside limestone cliff, once described by Dean Morgan as taking almost as much water as *Growling Swallet*. The North Lune karst area lies in a relatively large area of glaciated Ordovician limestone extending about 4-5km in width from the Pre-Cambrian (Hastings) dolomite at *Hot Springs Creek* in the east, then west to *Mesa Creek* and beyond - with several unexplored cave entrances, plus the two unexplored swallets: all situated in lush Celery-Top, Myrtle & Sassafras rainforest.

With a multi-national track clearing team of nine people, including two overseas visitors, two locals and five STC members (or associates), we set forth – via a brief visit to Andrew Skinner's residence at Hastings - eventually departing from the Hastings Caves car park in drizzly rain around 11am. We were a formidable team with two chain saws, axe, slash-hook and a chainsaw driven hedge trimmer (courtesy of Andrew Skinner), pack loads of fuel, oil, chain saw tools and sharpening files, plus a 40m rope and SRT gear – and the "food for thought" culinary comforts ferried along by Robyn. However, we were lacking one item: an extra container of fuel…. we had been a little too optimistic – believing that a gallon tin of two-stroke fuel would be enough for the three chain saw units for the day, all operating near each other – an extra container of fuel had been left behind!!

Our track-cutting started in earnest a little over half way to *Mesa Creek*, just past the first trackside outcrop of limestone near the two small caves: NL-1 and NL-2 – continuing on from previous track-cutting efforts by Jeff Butt, Robyn Claire, Mick Williams and myself. The track-finding, chainsaw team of Arthur and Neil headed out front with Damian and Monty bringing up the rear with hedge-trimmer, Hans wielding slash hook and Jodie, Penny and Shalom, acting as back-packing sherpas, - or like Hans, ferrying fuel back and forth between the three chainsaw units. Due to the vast amount of Horizontal Scrub along with tree fall and limbs across the track, we had some difficulty locating parts of the original walking track. The hedge trimmer proved very useful for making a substantial dent and wider walking track through the thicker sections of *Gahnia* cutting grass and parts of the tangly *Bauera* scrub, intertwined with *Gleichenia* fern.

Eventually, we managed to reach our primary destination late on Wednesday afternoon about 4.30pm. *Mesa Creek* was still as I remembered it - a very scenic spot: a dry creek bed abounding with ferns, mosses and fungi growing between the cobbles and boulders and a surround of tall trees including creek-side myrtles. There had not been quite enough two-stroke fuel to finish off all the hedge-trimmer work through the *Gahnia* and *Bauera* sections, and there was still a little bit of chain saw tidy-up work to do, but now the job was basically done – our primary goal had been achieved: there was at last a well-defined walking track to *Mesa Creek*.

After a considerable amount of sweat and muscle effort for the day, there seemed to be little enthusiasm to now go looking for caves. But then again, as Hans so rightly pointed out – he had carried in a rope and all his caving gear, so… he and I headed upstream while the others sensibly walked out in daylight. Penny and Monty were keen to get back to Hobart for the STC social night dinner at the Mexican restaurant, followed by the 9pm viewing of Peter Hollings' slides of caves in Mexico. Robyn was keen to go back and check out more of the abundant trackside fungi and departed along with the others carrying out the heavy gear in daylight, leaving Hans and I with the slash hook. The two of us did our rock-hopping thing, clambering upstream for about twenty minutes to half an hour or so in fading

Arthur Clarke. near some fallen branches across the track through North Lune karst.
Photo by Robyn Claire.

daylight, passing large glacial till boulders of limestone and some iron-stained boulder debris: evidence of a recent collapse in a streamside glacial moraine. The moss and algae covered stream boulders were perilously slippery in parts of the dry creek bed shielded by the tree canopy and Hans soon learnt that gumboots were not desirable footwear. So "one twisted ankle and twisted knee" later – about ten minutes short of our swallet entrance, I decided for Hans' sake it was time to relieve him of his heavy pack and turn back, heading for home – the very little light emerging through the trees was now rapidly diminishing.

Mesa Creek at last - Standing in the dry streambed (L to R):Shalom (crouching), Jodie (standing), Hans (astride chainsaw), Neil Seabourne, Penny, Damian Seabourne (with chainsaw) and Monty Farrah. ***Photo by Arthur Clarke.***

The walk along the now cleared track from *Mesa Creek* to the car park only took the others about an hour in daylight. But, another hour or so later in the darkened forest, with Hans now encumbered by a crook knee and using the slash hook as a walking stick, it took us an hour-and-a-quarter to hour-and-a-half with cave helmet lights ablaze! However, the track is still not without some obstacles - much of the trimmed or slashed *Gahnia* cutting grass was left lying on the track and became quite slippery in places where the slash had been wetted by the drizzly rain.

So at last... *MESA CREEK* is now open for business! ♦♦♦

Kazard Dum

20/5/2000

Party: Ric and Janine Tunny and Pete Hollings

By Pete Hollings

We left Hobart early Saturday morning and headed out to the Junee-Florentine karst. As many of the pitches in Kazad Dum had been rigged by Jeff, the plan was to take advantage of this and do a quick trip to the sump and back. The bad weather over the last few days nearly brought an early end to the trip as a couple of trees had blown down on the dirt road up to the car park. Fortunately after we'd cleared a few branches there was just enough room to drive around them.

The cold damp weather meant that we wasted no time getting changed and were soon following the well marked trail out to the cave. Once we got to the entrance it was clear that, in this area at least, Tassie's drought had well and truly broken. The raging torrent that was flowing in to the entrance forced us to reconsider our plans. We abandoned the ropes we had brought for the lower part of the cave, deciding instead to be satisfied with a trip down to the streamway and back.

We headed into the cave via the Serpentine route before rejoining the main route at the top of the first drop. Unfortunately we still had to cross the stream as it flowed into the cave insuring that we were all soaked to the skin. We quickly descended the first three short drops before reaching the 28m pitch. This caused a little concern for Ric and Janine as Jeff had warned them that the 8mm rope was very fast. As it turned out, with the help of an extra karabiner, their Petzl "Goes" handled it OK. Coming down last I was able to thoroughly enjoy this drop as it popped out of the roof of a sizable chamber. A quick scramble, a little bit of route finding and we were soon dropping down the 21m drop to the streamway. Although the pitch itself was mostly dry a quick look at the waterfall coming down behind was in full flow and made a very impressive sight.

Leaving behind some vertical gear we headed off down the streamway for a look at the next pitch. At times the water in the stream was thigh deep but it didn't pose too great a challenge. A quick look convinced us we had made the right decision. The rope was running straight down through the waterfall, despite being rigged in what had probably been a dry location a few days ago.

As by now we were all soaked and starting to get a little cold we headed back out. The ascent was uneventful although a few problems with my lights meant that Janine had a long cold wait at the top of the last drop as Ric and I sorted things out.

Although an enjoyable trip, Kazad Dum was a rude reintroduction to the "joys" of cold wet caving, bringing back far to many memories of my student days in the cold, dank caves of Yorkshire, rather than more recent and warmer trips to Mexico. This was compounded by the fact that at one point during the walk back to the car the near constant drizzle changed to hail. At least the sun came out as we were changing !

♦♦♦

SAR Incident Report: Long Overdue Cavers 26/4/2000

By Jeff Butt

On the Wednesday after Easter, at 11 a.m. the phone rang.... it was one of those calls...."my flat-mate and his girlfriend went caving over Easter and haven't come home....I was given your number to call if they didn't come back!"

Some information gathering ensued, "John" and "Mary" [false names for this article] had left for Ida Bay on Easter Sunday; they had planned to visit Midnight Hole, Mystery Creek and Mini-Martin over Sunday to Tuesday; they were car camping

and not due home till Tuesday evening. John had visited both caves before and I personally knew of his caving experience....so since they weren't back there must be serious reason why not. I ascertained the model and make of John's car and decided that because of the potential severity of the situation to get the assistance of Police Search and Rescue.

I gave Police SAR a call, Damian Bidgood was holding the fort.... and a game plan was worked out.... Damian quickly looked up what the Rego. number was and arranged for the local Police to check out if the car was still down at the Ida Bay caving road-head. We chose to get 4 others (2 Police and 2 Cavers) to make the initial response team of six to go down and to check out both Mini-Martin and Midnight Hole; that was provided the car was still there. I did a quick ring-around, and the first two people I spoke to, who were available, were Liz Canning and Trevor Wailes. At this stage I didn't bother leaving messages on answering machines. Via Liz, I had teed up Hugh Fitzgerald as the person to phone more cavers should the need arise. Damian had called up Gerrard Dutton and Richard MacMillan.

The report came through that their car was still there, so we headed south. When we arrived we noted that the car looked very clean (e.g. no mud on door-handles, seats etc.) and we couldn't see any signs of muddy gear, so we hypothesised that John and Mary might have had some mishap on their first day of caving.... so even if they were uninjured, they would be very cold by now. We hoped that they might just be stuck on a ledge in Midnight Hole with a stuck rope and insufficient rope to get down the last pitch, but feared something worse.

Damian, Liz and I were to check out Mini-Martin; Trevor, Gerrard and Richard were to check out Midnight-Hole and Mystery Creek cave. We had a local ambulance person on standby at the road-head. As we headed up the old-quarry we kept an eye out for footprints...there were literally dozens of them through the quarry from the CAVEX bolting workshop held two weeks before! At the top of the quarry, the cutting grass fronds suggested that the last person on this track was heading out.... further on, at the one good muddy spot there were no footprints, after we went through there was obvious signs...so we deduced that they were extremely unlikely to be up at Mini-Martin. As a result we dumped packs (containing 200 m of rope) and zipped up to the Mini-Martin entrance to verify our thoughts; no ropes or signs of people there, so we had eliminated Mini-Martin. So, back down the hill we went, collected our packs and back to the road-head. There was no news from the others, so we wandered into the entrance of Mystery Creek. Meanwhile the other team were somewhere en-route down Midnight Hole.... we feared that their slowness indicated that they were 'picking up the pieces'...not a pleasant thought.

Liz and I headed in to Mystery Creek with the intentions of going through the Matchbox Squeeze to try and contact the others to get some information on what was going on. Damian waited outside at the junction of the Midnight Hole turnoff. As we crested the first rock ridge in the "large confusing chamber" on the outside of the passage leading to the Matchbox Squeeze, low and behold we ran into two cavers...the missing parties. A quick assessment showed that John and Mary were uninjured, just a bit cold and hungry (the Mars Bars in my pocket were appreciated).... and very pleased to see us!! They had been unable to find the way out, and so had set up 'camp' to await for rescue. After a brief chat I left Liz to assist them to pack up, whilst I quickly headed out of the cave to alert Damian that the missing parties had been found and to call off the search. Damian and I headed back into the cave to assist them out, and to check on the Midnight Hole party.... they had been slowed down by a couple of minor problems, but were fine.

Anyway, here are the full details of events leading up to the rescue.... on the Sunday afternoon, after lunch, John and Mary headed up to Midnight Hole and had a great pull-through trip. They passed the Matchbox Squeeze and entered the "large confusing chamber", where they became very confused about the way out. John had done the trip around five years before, but the way on had eluded his memory. They spent about seven hours looking for the correct way on, but were unsuccessful, by this time it would have been around midnight, and so they chose to set up camp. They constructed a mattress of beautifully layered caving rope, packs and huddled together under their space blanket. Since they had eaten just before coming into the cave they only had minimal food with them, one museli bar.

The next day after a somewhat cool night, they again attempted to find the way out (they both had Oldham's and Petzl Zoom backups, plus a small torch, so had light remaining) for several hours..... again they were unsuccessful, and so retreated to 'camp' to conserve the resources they had left. Apparently there was a lot of discussion of when the rescue would come, what food they would like to eat etc. etc. They spent another two nights in the cave and had estimated that rescuers would turn up sometime on Wednesday morning (we actually turned up ~5 p.m.). John and Mary spent 78 hours underground...quite a trip.

Conditions at Ida Bay had been quite dry in recent times, thus Midnight Hole was dry, but there was the normal puddle in the bottom of Matchbox Squeeze. As a result both John and Mary were dry. They were dressed in thermals and non-cotton oversuits and thus were reasonably comfortable in the 10°C conditions. However, as the length of time they were in the cave increased they were getting colder as their space blanket was tearing (they are flimsy things at the best of times) and their energy reserves were being depleted as they had had minimal food for 3 days.

There is a logbook at the start of the track to Mystery Creek Cave, John and Mary did not make any entry into this. [Incidentally, had they done this they would most likely have been rescued on Easter Monday; as there was another rescue in the area; for a lost bush-walker. The logbook was checked

on this occasion, and it is possible that John and Mary, might have been noted as being overdue (which they were) at that time. Given that their car was there as well, it is very likely that a search would have been instigated for them.]

So, what can we learn from this event and how can such occurrences be prevented??

Ideally one would:

- take someone along with you who knows the route. If this is not possible, then learn the route by checking it out from the bottom before committing yourself to a pull-through trip. Carry a map of the cave (if one exists) and compass; these may aid your route finding.
- use any logbooks/intentions sheets that exist; if none exist, then a note on the dashboard of your car giving at least a Date and Intention, e.g. Sunday 23/4/2000, Midnight Hole through trip.
- if you are going on multi-day trips, consider having some arrangement in place to phone someone up at the end of each day to report that you are safely out each day.

As a matter of course:

- always carry at least one space blanket per person; they do not stand up to use very well. Survival bags are sometimes better than blankets; perhaps the ideal is one bag and one blanket per person.
- always carry spare food and clothing in **excess** of your anticipated needs during the trip in case you do get stuck in the cave for any reason.
- go caving with a party-size of four (or more) if at all possible (or appropriate); if there is an accident that leaves one person to assist and two to go for help; if you are lost, four people are more likely to discover the way out faster than two people will; also four people make a warmer huddle than two.

If you become lost in a cave here are some strategies to try:

- retrace your steps to your last known 'correct point' then progressively look at each option until you decide whether it's right or not right. To ensure that you don't get further lost whilst doing this, mark your route, e.g. distinctive rock cairns, trail out your rope behind you etc. If the route is right, then go back and remove your cairns/markers. If the route is wrong and there are no further options, then retrace your steps, removing your markers as you go and return to your last known 'correct point', and try another option for the way on/out.
- if you have pen / paper / map / compass use them to assist in finding the correct way out, make a crude map as you go if it helps. (for distance you can use paces, or rope-lengths etc.)
- trog marks may be useful, but then again they may also be mis-leading in a well-used cave.
- natural clues may be useful, e.g. direction of a stream flow. Mystery Creek Cave is an inflow cave, thus if you find water, heading upstream is more likely to lead to the way out than heading downstream is. In a big cave, or a cave with multiple entrances there are generally air-flows; following the airflow may lead to an entrance; however air-flows are much more fickle than water flows.

It is human nature for 'call-out' people to procrastinate on calling for help, in the hope that the overdue people will sort out their own problems without the embarrassment of having a rescue instigated. If something has gone wrong, then every minute counts; so please stress to your call-out people to act promptly (but not to panic and to instigate a call-out earlier than you say!) on call-out times given. Be realistic with your call-out times too, for caving with peers, give yourself about 50% of the expected trip duration for normal delays, e.g. if you are going on an 8 hour trip and are due back at 6 p.m., allow an extra 4 hours for your call-out time, i.e. 10 p.m. If you change your plans for any reason, then do inform your call-out person; or at least you should have told them of your "plan B" trip. [An example of an Intentions sheet is included below....feel free to modify/copy this and use it.] If you are delayed and will be later than your call-out time, then get to a phone as quickly as possible to avoid an unnecessary call-out.

♦ ♦ ♦

CAVING TRIP-INTENTIONS SHEET

Leader:_____(1) Age:____ Phone: _____(W)
Others in party: _____(H)
_____(2) ____ _____(H)
_____(3) ____ _____(H)
_____(4) ____ _____(H)
_____(5) ____ _____(H)
_____(6) ____ _____(H)
_____(7) ____ _____(H)
_____(8) ____ _____(H)

ASTERISK (*) THE EXPERIENCED CAVERS

PLANNED TRIP:
Date:_____ Departure Time:_____ Expected Return Time:_____

CAVE BEING VISITED:
Cave Name:_____ Cave Number: _____
ALTERNATIVE CAVE (IF ANY):
Cave Name:_____ Cave Number: _____

VEHICLE DETAILS:
Vehicles left at: _____
Registration No's:_____
Make/model/colour: _____

EQUIPMENT TAKEN (please complete/tick as appropriate):

Light:__	Spare light:__	Total Light duration:____hrs	
First Aid Gear:__	Space blankets:__	Rain Coats:__	Spare clothing:__
Surface map:__	Cave map:__	Compass:__	Whistle:__
Ladders:___ (m)	Ropes:____ (m)	Spare rope:____ (m)	Rescue gear:__
Food:__	Stove & fuel:__	Other (specify):_____	

FOR CONTACT PERSON: IF I HAVE NOT CONTACTED YOU BY:___a.m./p.m., ON:_____DAY, _____DATE
PLEASE CONTACT IN THE FIRST INSTANCE: CLUB SEARCH & RESCUE OFFICER (_____) ON (___)_____

OR IN THE EVENT OF NO ANSWER, PLEASE CONTACT POLICE SEARCH AND RESCUE ON: (___) _____

I WILL NOTIFY YOU AS SOON AS WE RETURN:

signed: _____, date __/__/__.

An Introduction to ASF: Your National Caving Body

By Arthur Clarke

ASF – the Australian Speleological Federation – is your national body, representing the interests of recreational caving in Australia and ASF corporate member clubs or individual members. STC has been a corporate member of ASF since 1997, but I suspect STC members know little about ASF: its doings or structure – apart from the ASF membership card, ASF Insurance and what appears in the quarterly publication: *Australian Caver*, or the occasional snippets on *Ozcavers* or our STC List Server.

One of the more exciting events coming around on the ASF calendar is the biennial conference – a great opportunity for STC members to meet other cavers and check out caves in other parts of Australia. At ASF Conferences, there are the more serious sessions of papers and posters, workshops and seminars, photographic exhibitions and competitions – along with the outdoor fun things such as "*Speleosports*", day trips to cave/karst areas and the numerous options for different pre- or post-Conference field trips. ASF Conferences also include time devoted to ASF Council meetings, which are primarily attended by nominated club delegates or their proxies.

Some STC members may have read the recent promo from ASF posted to the STC List Server and/or *Ozcavers* regarding the forthcoming 23rd ASF Conference at Bathurst in NSW - from December 28th 2000 to January 2-3, 2001. The conference theme title is: "*2001: A Cave Odyssey*". Accommodation is at the All Saints College in Bathurst, with options for those who want to camp or find alternate hotel or caravan park accommodation. The recent Conference promo reads as follows: Did you know that... at this years 23rd ASF Biennial Conference there will be a fantastic Family Fireworks display held at the college on New Years Eve! AND… that the transport to the Abercrombie, Jenolan, and Borenore field trips is in air-conditioned coaches! AND… on these field trips yummy packed lunches for each person will be supplied! All these are included in your conference fee! Don't forget to book (EARLY – NOW) before 31st August to qualify for early (discounted) registration and check out the ASF Conference web site at www.rutco.com.au/asf2001 The Conference Secretary is Jodie Shoobert; she can be contacted on email at: Jodie@rutco.com.au or by writing to: The Conference Secretary (Jodie Shoobert), PO Box 15, Broadmeadow, NSW 2292. Telephone: (02) 4926 1959, Fax: (02) 4926 1772, Mobile: 0408 261 959. The Conference convenor is Angus Macoun (Phone: 02 9416 2588) and the general email contact address for all conference enquiries is: asf2001@rutco.com.au

As mentioned above, once a year, ASF member clubs send their delegates or proxies to a national gathering: ASF Council. Every second year, these Council meetings are held in conjunction with an ASF Conference. At Council meetings, delegates discuss issues of national interest and the motions or business arising from member clubs, ASF Commissions or ASF Committee reports and State Speleological Council reports (from NSW and SA). The reports from the Convenors of these commissions and committees are usually incorporated as printed statements, along with the Treasurer's report and audit, in the ASF Annual Report distributed to all ASF member clubs and tabled at the ASF Council meeting.

There are numerous Commissions and Committees – and these give you an idea of the depth and breadth of ASF activity. The ASF Commissions (and their convenors) include: Administration (Chris Dunne); ASF Awards (Lloyd Robinson); Bibliography (Greg Middleton); Cave & Karst Management (John Dunkley); Cave Diving (Peter Kraehenbuhl and Tim Payne); Cave Safety (Mike Lake); Caving Leadership Standards (Alan Jevons); Codes & Guidelines (Evalt Crabb); Conservation (Peter Berrill, Arthur Clarke, Keir Vaughan-Taylor and Rauleigh Webb); Documentation - formerly convened by Peter Matthews, now a working group management team (Keven Cocks, John Dunkley and Jill Rowling) assisted by the respective ASF State Area Karst Index Coordinators: Arthur Clarke (TAS), Peter Dykes (NSW & ACT), Mick Godwin (QLD), Peter Matthews (VIC), Steve Milner (SA), Bruce Swain (NT) and Rauleigh Webb (WA); Insurance (Alan Jevons); International Relations (Jill Rowling); Journal Editor (was Sherry Mayo); Journal Production (Angus Macoun); Library (Cathy Brown); Publications (Angus Macoun); and Survey & Mapping Standards (Ken Grimes). ASF Council also hears reports from a number of committees, such as Copyright, Intellectual Property, Jenolan Caves World Heritage, Karst Index Software, Strategic Planning and the next 2001 ASF Conference (at Bathurst).

At each ASF Council, delegates elect members to its management team, referred to as the ASF Executive: a team of nine officials, augmented by additionally appointed non-executive officers. There are only two categories of elected ASF officials: the "ordinary" Executive officers and the separately elected ASF President. Aside from the position of ASF President, the roles of other elected officials are determined by consent during a meeting of the "new" Executive following the conclusion of ASF Council meetings. Four of the elected members are appointed as Vice Presidents (VP's), one of whom is delegated to the role of Senior Vice President. Other ASF Executive position roles are: General Secretary, Treasurer, Executive Secretary and Membership Secretary; the remaining members (retaining the status of VP) are usually given specific functions.

The members of the current ASF Executive are:

- Peter Berrill (QLD): President;
- John Dunkley (ACT): Senior Vice-President;
- Keven Cocks (SA): General Secretary;
- Grace Matts (NSW): Treasurer;
- Arthur Clarke (TAS): Executive Secretary;
- Phil Lardner (NSW): Membership Secretary;
- Chris Riley (TAS): Vice-President;
- Joe Sydney (NSW): Vice-President;
- Wayne Tyson (WA): Vice-President.

The Executive has the power to co-opt one of more additional non-executive VP's, in addition to the other positions of non-executive officials. Currently, these are:

- Peter Dykes (NSW): Non-Executive Vice President;
- TBA, possibly Geoff Crossley (ACT): Editor of *Australian Caver*;
- Angus Macoun (NSW): Publisher of *Australian Caver*;
- Peter Nicholson (ACT): ASF Public Officer.

Though not directly linked to ASF, the previous mention of *Ozcavers* reminds me that STC readers maybe interested to know that Rauleigh Webb has established another email List to deal with Cave Conservation issues in Australia. Referred to as CaveCons, the list can be joined by contacting Rauleigh or directly accessing the internet address: http://listmaster.iinet.net.au/list/cavecons

On the topic of cave conservation, there are a number of on-going issues in Tasmania that ASF has been involved in. Both ASF and STC have submitted objections to an Exploration License (EL) application for the Mt. Cripps karst area in NW Tasmania, where Western Metals (the owner of the Hellyer Mine) proposes to quarry limestone for treatment of its mine tailings. Similarly, ASF has also supported the groundswell of opposition to mining of magnesite karst in both the *Arthur River* and *Savage River* areas of NW Tasmania. Fortunately, it now appears that the magnesite pinnacle karst and associated features in the *Arthur River* region of NW Tasmania is going to be spared from mining for magnesium metal. However the magnesite hydrology (including warm springs), in an area between the *Arthur River* and *Keith River* and in vicinity of the *Lyons River* is still potentially under threat, along with the other more significant magnesite caves further south near *Savage River*.

ASF has also had recent input into a number of other cave or karst management issues facing Tasmania. Amongst these issues, there is the sudden rush to finalise the numerous management plans for karst and caves in National Parks of Tasmania, following the Tasmanian RFA requirement for management plans for all Park areas to be completed by end of the year 2000. ASF (and STC) have both forwarded comments and/or submissions for the Mole Creek Karst National Park and the Mount Field National Park; the latter contains many caves within the high sensitivity zones of the Junee-Florentine karst. ASF has also commented on the on-going problems surrounding the possible hydrological pollution from toilet waste at *Hastings Caves* car park. Another issue that ASF may become involved with is the concern regarding the decision to proceed with Basslink: connecting the Tasmanian power grid into the national (mainland) system. The main concern here from the Tasmanian perspective relates to the effects of downstream flooding and siltation on riverbank caves, due to the more frequent use of hydro impoundment dam waters being released downstream after use for power generation to meet the sudden and variable peak consumption power demands from mainland consumers.

Continuing with the cave conservation theme, the next ASF *Australian Caver* (#151) is going to be an issue devoted to celebrating the Mt. Etna caves conservation campaign in North Queensland. The quarterly editions of *Australian Caver* nominally appear in February, May, August and November, each year. This next issue (number #151), currently being produced in Rockhampton by the Central Queensland Speleological Society (CQSS), will appear a little later than usual – but accompanied with Issue #152: the *ASF Members Handbook*. ASF has just finished compiling this 26 page "*Members Handbook*" and when printing is completed, it will be distributed as issue #152 of *Australian Caver*, in same envelope as the next "Mt. Etna" issue - number 151 (probably in about 6-8 weeks time). ASF are currently considering the appointment of Geoff Crossley as the new Editor to take on *Australian Caver*, since Sherry Mayo has stepped down after completing her last edition (#150). While on topic of publications, the final copy of proofread contributions for long-awaited Joe Jennings tribute book has now gone to the publishers for printing. (The late Joe Jennings was renown as an early karst geomorphologist in Australia and author of one of the first major international texts on karst: "*Karst Geomorphology*").

Also on the topic of ASF publications, the Proceedings of last ASF Conference held at Yeppoon (near Rockhampton) in January 1999, are now available along with a CD version which includes photographs taken

during the conference and images from the first ever ASF Conference cave art exhibition in Australia. Both are available at $25.00 each (i.e., $50.00 for both Hardback copy and CD) via the CQSS Secretary: Debbie Roberts - forwarding monies direct to: CQSS, PO Box 538, Rockhampton, Qld. 4700. Email enquiries can be directed to the CQSS address: cqss@cqnet.com.au

Finally, on the topic of internet access to ASF – a more recent innovation as an ASF communiqué to its corporate member clubs is the ASF Speleo Email Bulletin produced by former ASF Membership Secretary: Angus Macoun. It is distributed to all ASF member clubs – usually via their club secretaries, or to those ASF executive members in respective ASF clubs (or whoever has email access), for dissemination of ASF news and events to members. The current ASF website address is via Peter Matthews at the University of Melbourne: http://rubens.its.unimelb.edu.au/~pgm/asf This site has its various html suffix extensions for ASF club matters, ASF Insurance, ASF commissions, ASF codes (including the Minimal Impact Caving Code etc.) along with links and connections to other sites such as Ozcavers (a non-ASF caving list server) and allied sites such as the homepage for Australian Caving at: http://rubens.its.unimelb.edu.au/~pgm/austcave/index.html ASF is now in the final stages of planning its own website at an independent host ISP, with its own registered url: http://www.caves.org.au This is expected to be up and running around June or July this year: 2000.

JF40: A Piece of the K.D.- Splash Pot Puzzle?: 2/5/2000

Party: Phil Rowsell and Jeff Butt By Jeff Butt

I had walked past this cave entrance countless times, but all of a sudden it was a cave to visit, as it lies somewhere above the '*Mad Englishman and Dogs'* extension of Splash Pot discovered on 25/4/00 (for details of this, see elsewhere in this Spiel). Rolan Eberhard in Spiel 274, (May 1992) speculated on the possibility of JF40 connecting to Khazad-Dum, but that was before the extent of Splash Pot was known. The aims of the day were to thoroughly check out this un-named cave, and to fully survey it so that we could determine how close it's passages went to those of both Splash Pot and Khazad-Dum. We also wanted to surface survey it into our network.

Despite a thorough search, we could not locate any number tag. Does anyone out there know where the tag is, or was? (We did survey in a prominent piece of rock near the entrance drop that would be an ideal site for a new tag, if needed.) Here is another good reason for photo-tagging entrances, and marking on the photo where the tag is located.

It was quite fun going to a cave that wasn't Splash Pot or K.D....a change is as good as a holiday. In the article referred to earlier, Rolan had described JF40 as "the grotty looking rift", which was accurate, but in reality it was quite a pleasant little cave once beyond the organic debri-slide entrance slope. Rather than to grunge down through the debri, we chose to rig the entrance as a pitch with a single short piece of rope from a tree on the small cliff line above the cave, a deviation from a rotting log on the opposite side gave a nice free-hang clear of all the gunge.

The cave appears to be developed in a steeply dipping bedding plane rift, all the passages trended down at the about the same angle and there were many small streamlets entering the ceiling, presumably these are from the many soaks along the contact zone above. There was a bit of formation as well as some large broken stalagmites pieces on the floor. There was an observable breeze, so the cave does go somewhere. Following the stream down, we came to a wet squeeze; Phil braved this and got through to a narrow boulder filled rift; to progress further would entail some digging. Despite coming from the 'digging country', Phil didn't seem very enthused about digging in here; debris removal would be a problem.

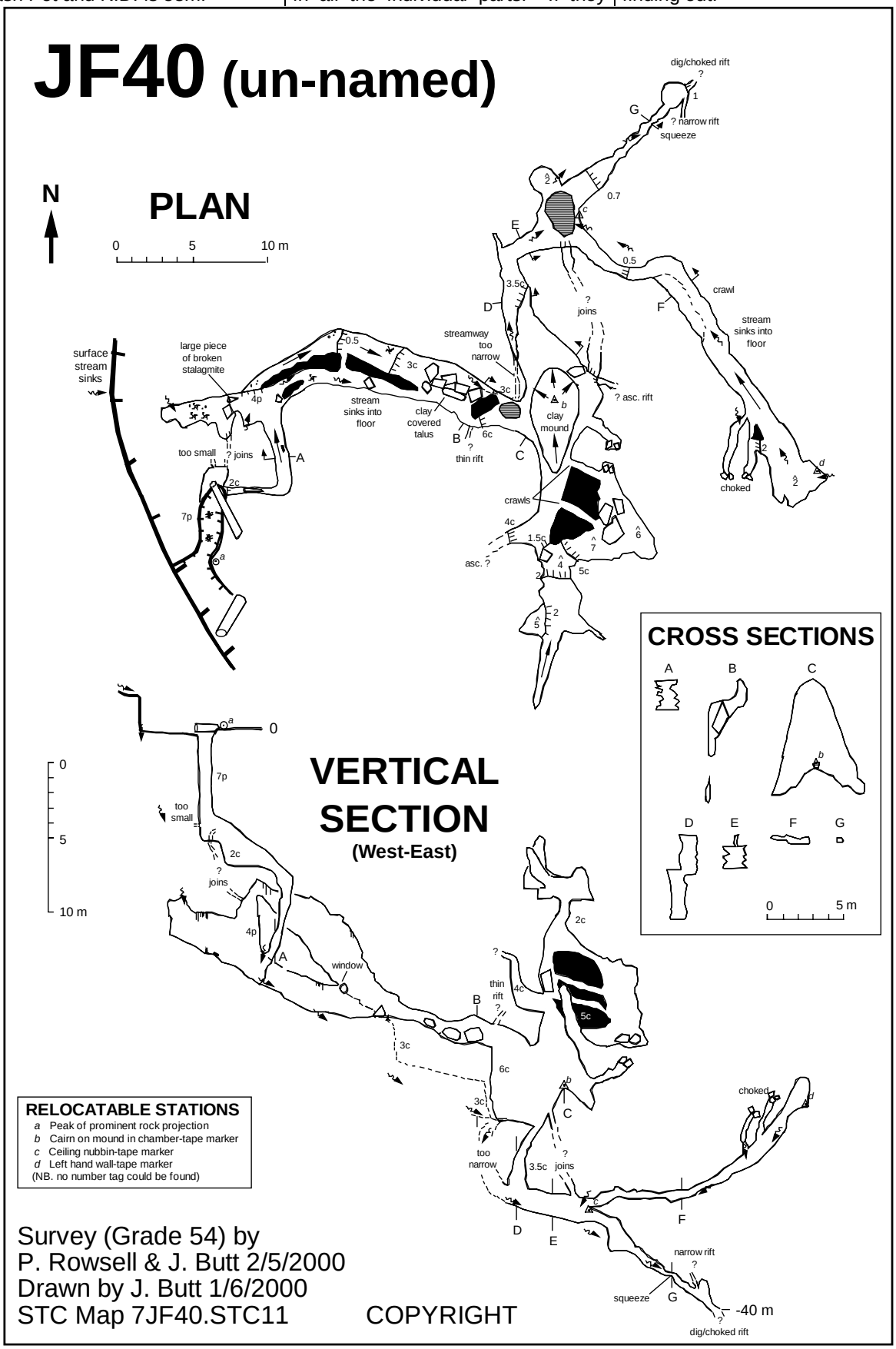
So, we continued on and surveyed some other side-passages and emerged to daylight after a good thorough look around JF40. We surface surveyed from the entrance to the JF4 tag, and as we had time up our sleeves, we located JF5 and linked that tag into the surface survey network as well. The JF5 tag was covered by moss, but the outline was just visible. Moss growing over tags does seem to be a bit of a problem, perhaps they should be made from copper instead of aluminium; the fungicidal properties of copper might tend to prevent moss growths.

The 1985 Karst Index records JF40 as having an estimated vertical range of 30m and an estimated length of 90m. Our survey, see below measured 162m of passage and gives the cave a depth of 40m.

From looking at the survey data on the computer afterwards, the "complex of rising passages and avens leading off in the direction of JF40 from the start of the streamway in K.D." referred to by Rolan in the afore-mentioned article appear to be formed lower down in the same bedding plane that JF40 is formed in. The 'along bedding plane' distance (between stations JF40-BP28 and JF4-KD265) between the two caves is 41 m. On the K.D. side station KD265 is at the start of a boulder collapse, Phil (on 3/5) made a tiny bit of progress here, but the amount of loose rock made him exercise a discretionary retreat; so the actual unmade distance is less than 40m. There is a noticeable draft in these passages as well, thus Rolan's idea of a possible connection between the two caves seems very likely. However, there are two other options: 1. the lowest parts of JF40 actually lie underneath the JF5 tag; we've not visited (or surveyed) JF5 yet, but it is possible there is a connection between JF40 and JF5, (and/or Splash Pot and JF5 for that matter), and two parts of Splash Pot appear (Plan View) between JF40 and JF4, but are lower down. Not all the leads in this part of Splash Pot (which carries a breeze) have yet been investigated. At the current end of this part of Splash Pot we have several avens right in the area beneath the 'gap' between

JF40 and JF4. The vertical distance between Splash Pot and JF40 is 85m, whilst the vertical gap between Splash Pot and K.D. is 53m.

Who knows, maybe all of JF4, JF5, JF10 and JF40 are all linked in this region; certainly there is air flowing in all the individual parts. If they are, then the potential is there for quite a big system. No doubt some more work will bring us closer to finding out.



Khazad-Dum....A Re-survey: 21-23/4/2000, 1,3 & 7/5/2000

By Jeff Butt

Parties:

21/4/2000	Jol Desmarchelier, Liz Canning, Hugh Fitzgerald, Phil Rowsell, Jeff Butt
22/4/2000	Jol, Phil, Jeff and Trevor Wailes
23/4/2000	Jol, Phil and Jeff
1&3/5/2000	Phil and Jeff
7/5/2000	Dave Rasch and Jeff.

With our current work in the Khazad-Dum (K.D.) area we were keen to relate discoveries in Splash Pot, Dribblespit etc. with the nearby Khazad-Dum; but there are some problems with the early 1970's data from K.D., i.e. not all the data is held in electronic form and for the data that is held there are some problems with data quality. Thus it became worthwhile to put the effort in to re-survey K.D. and to keep a good eye out for any leads that might lead us closer to any of the nearby caves. This little project was also a good opportunity to impart some surveying skills to some of the newer members of the club, not to mention going caving in K.D. which is a very pleasant (but noisy) thing to do anyway! [Although it was made somewhat unpleasant this time by the recent demise of a potaroo in the K.D. entrance.... with each trip the fetid fumes of the slowly putrefying corpse became more and more objectionable.]

Trip highlights:

21/4 Liz got her eye tuned in to using the instruments and had lots of practise on the many, many short shots down the *Serpentine Route*. Hugh and Phil learned all about 'frigging with the rigging', but it didn't matter as the survey team didn't overtake them. Surveyed 387m in 85 legs.

22/4 Today Jol got his eye tuned in....well eventually... to the instruments. Trev and Phil made smooth work of the rest of the rigging. Surveyed 217m in 40 legs and we were pleased to see the end of the bendy bits!

23/4 It was 'cold feet day' today; snow-melt made the main streamway rather cold and we had to retreat to survey side-passages to let our feet re-warm. We surveyed from the first waterfall pitch downstream of the *Serpentine Route* upstream to the main waterfall near the 21m pitch. Surveyed 319m in 52 legs.

1/5 Jeff and Phil rigged and surveyed down the main drag from the entrance, 314m added over 58 legs.

3/5 Phil and Jeff surveyed the maze of passages in the bedding plane rift below the 21m pitch, 271m added over 39 legs. Quite a bit of breeze chasing...but no we didn't hit Splash Pot, or JF40...but they're not that far away!

7/5 Dave and Jeff rigged the lower waterfall pitches and surveyed 325m in 63 legs to link in with the surveying from the Dwarrowdelf side last year. A couple of very interesting leads were spied...we must return.... and I hate to say it, but we must return to Dribblespit one day too!

This data coupled with surveying in Dwarrowdelf last year (782m, 65 legs); brings the K.D. system to a surveyed length of 2615m thus far. There are still many leads and still some large chunks to survey, including the *Depths of Moria*, the JF5 entrance series and down the wet-way. JF69 needs to be tied in as well.

The depth still stands as 275m (JF5 tag to Sump 1), or 285m (JF5 tag to bottom of dive in Sump 2), as reported in my article in Spiel 314; but this might change once the *Depths of Moria* are properly surveyed.

Overall the data quality was very good, the mis-close on the big loop down the *Serpentine Route* and back up the main drag (a traverse of 939m) was just 5.2m, i.e. 0.55%, which is better than the expected accuracy of 2% for our instruments (Suunto's and fibreglass tape). Thanks to all the surveyors for their good efforts.

Splash Pot (JF10) 'Mad Englishman and Dogs': 25/4/2000

Party: Rolan Eberhard, Phil Rowsell and Jeff Butt. By Jeff Butt

The aim of the day was to show Rolan the 'new' bits of Splash Pot and to tidy up some surveying loose ends. It was a very smooth trip down; must be getting used to Close to the Bone, as we got through that in about half the normal time, despite Phil having a case of a very bad day, partly due to the chunky ammo. case in his pack and the number of pints of Guiness he had the night before!

Rolan was suitably impressed with the many impressive straws...extreme care (especially on the way out when one is a bit tired!) is needed by any visitors to this area as there are several very delicately positioned straws en-route.... next trip some track marking/discreet signing would be a good idea.... to date we have been diligent at keeping on the 'straight and narrow' without these aids...but the sooner of later someone will stray and widen the paths, or be a bit careless and break one of the exposed straws. Dave Rasch suggested we signpost the delicately placed straws with a monetary amount that must be paid to club coffers if they are accidentally broken. This idea has some merit; the old SCS 'swearing box' worked on a similar principle to disuade anti-social behaviour.... what's a straw worth?? Anyway, back to the trip...

An hour after leaving the surface we were at the top of 'Harrow the Marrow'. Rolan headed down for a look, whilst Phil and I headed off to tidy up some surveying loose ends

left by Dave and Jol on April fools day. Whilst I was sketching the complexities of the large labyrinth of interconnected chambers Phil was off exploring a talus pile and remarked that he got through and found a passage that goes and goes, with a draft to boot. It was however past the agreed time to meet Rolan, so we zipped back to find him not long back from the ascent. Rolan was suitably impressed with 'Harrow the Marrow', he remarked, "it's one of the best pitches he's done"! He too found the it very breezy half way up; at times the whole waterfall was blown sideways, but down the bottom there was no breeze. Rolan's FX5 light shed a little more light on things, but there is still some debate about where the breeze goes and what really is on the far side of the shaft.

Anyway, we then headed back to Phil's lead, and then Phil was off.... every now and then we caught a murmur of him jibbering on to himself...it was his first foray into virgin cave and he was suitably stoked by the experience. For a while we wondered if we'd ever see him again...but we did, eventually. Basically we were heading up a small streamway in the bottom of an inclined bedding plane rift; at times the rift extended up many meters...more "?'s" on the survey. There was a noticeable breeze, which was enticing.... but where was it going.... the compass suggested KD? We passed several side leads and small tributaries, but tried to stick with the breeze. Eventually we reached a large chamber with several steeply ascending passages and avens. We did not climb any of these (a couple were quite climbable). I was keen to survey the new ground, and so we surveyed our way back down the main drag to link in with the existing survey. It didn't take very long to add another 260m of passage to the survey...but there is more there; I noted at least half a dozen good leads on the sketches.

Rolan suggested we call the new section 'Mad Dogs and Englishmen', but in honour of Phil (self known as Madphil), I suggested 'Mad Englishman and Dogs' was more appropriate and we agreed!

We had quite a smooth trip out; Rolan agreed that the return trip from the bottom of Splash Pot is about the equivalent to a trip out from the bottom of Niggly Cave. Like Niggly, there is not really any particularly difficult obstacle, but there are many obstacles, each with some degree of gnarliness... and it all adds up. We emerged on the surface after another 'regulation' (~9 hour) trip down Splash Pot, all feeling a little weary.

Like all survey projects I've started in recent years.... this cave is only going to get bigger...every trip to tidy up a loose end or two seems to open up a new section and produce more and more 'loose ends' to be tidied up! The current depth is 306 m and surveyed length stands at 1628m (260 legs)...so Splash Pot nestles in at 4th deepest in the country (after Niggly Cave, Ice-Tube-Growling Swallet system and Anne-a-Kananda).

Off the top of my head, 'Harrow the Marrow' at 113m (measured by Phil on 1/4/2000) must be the 4th largest pitch in the country, being only exceeded by the 191m 'Black Supergiant' pitch in Niggly Cave, the 118m 'Heartbeat' pitch in Anne-a-Kananda and the 115m entrance pitch into Keller Cellar.

GPS...Selective Availability has Gone!!!

By Jeff Butt

In a fit of wisdom the US government decided to turn the GPS performance-degrading feature known as "Selective Availability" (SA) off at 0000 on the 1st of May. They said that this was so the world civilian community could benefit...well, that is anyone they're not at war with.... apparently they have developed some better gee-whizzo technology which lets them corrupt GPS signals in any region they wish without affecting the rest of the world.

For us, that means the GPS is now a much more useful tool, instantaneous positions are now accurate to around 10 m; if one averages for a few minutes, then the position can be nailed to a better than that. I gave it a quick test in the back yard; instead of seeing EPE (Estimated Position Errors) of around 40 m, one now gets 4 m! We can thus log access tracks and record cave positions ten times more accurately than before. This will be great for recording the location of a new cave discovered whilst bush-bashing in the scrub. So hopefully, we won't lose any more caves in the future.

Unfortunately the altitudes recorded by the GPS are still very poor and are best ignored. So, whilst the need for surface surveying maybe reduced, it isn't eliminated.

Please note that SA affects many of the positions currently stored in the GPS.... so they may be up to 100 m out...but for some caves, a rough position is better than none at all. Gradually as caves are revisited, these positions can be updated.

One thing to note is that, since the position can now be recorded accurately, it is worth going to the trouble of getting as close as possible (e.g. within a couple of metres) to the number tag at the entrance as you can. If this is not possible, then you may need to do a short surface survey from the point where you get good GPS signals to the number tag...if so, please return this survey information with the GPS unit so that the actual position of the number tag may be stored in the unit.

***STC** has caving lamps and helmets available for hire to Schools, Scouts and other groups with responsible caving leaders. Contact the Equipment Officer: **Jeff Butt** on **03 6223 8620** for details.*

Wolf Hole… Beyond Lake Pluto: 6/5/2000

Party: Jamie Allison and Arthur Clarke

By Jamie Allison

After viewing Arthur's pictures of *Wolf Hole* in the *Speleo Spiel* #318, I was keen to have a look at this cave. The plan was to start around midday and perhaps still get home at a reasonable hour, I left Hobart at 11:30 and arrived at Arthur's place in Francistown only an hour or so late. Arthur had only arrived minutes before me after spending some time in Hobart convincing his cat that a small holiday down south was a good idea. We then enjoyed a brunch brew and loaded up Arthur's Magna. We were about to begin the short trip to the *Hastings Caves* reserve when the Francistown house keys disappeared. Some time passed and we considered calling the SES to conduct a sweep of the area when suddenly the keys appeared near the cat flap. Perhaps "pay-back" for the forced holiday!

Investigating the box work sheets (weathering residual) beyond Lake Pluto ***Photo by Arthur Clarke.***

We had arranged this trip a few days before and had hoped for some more takers. Arthur conducted a quick ring around to several STC members: Tim Anderson, Hans Benisch, Jeff Butt & Phil Rowsell, plus two cave guides from Hastings, but all were unavailable. Arthur expressed a slight concern about our small party size of two, but we decided to go since we had already left trip details and callout arrangements with responsible people.

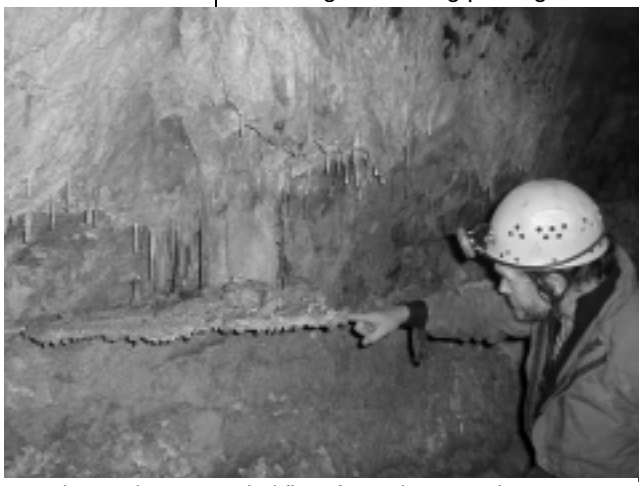
As we cruised through to the park ranger's office at *Hastings Caves*, Arthur made a courtesy call to the ranger on duty at the *Hastings Caves* booking office advising that two STC members were heading into *Wolf Hole*, so they also knew we were there. We drove up the gravel road (*Chestermans Road*), parking the car a few metres up from the start of the new access track to *King George V Cave* on the LHS: marked with two yellow flagging tapes on a thin sapling tree - then trogged up. Arthur started talking about some of the early history of cave discovery in this district, mentioning that there are several caves down slope from *Chestermans Road*, reportedly discovered by Amos Wolfe, a local cave guide in the early 1920's who is also accredited with the discovery of *Wolf Hole*. It appears that these caves have not been visited by cavers and have since been "lost". A search of the area may not be a worthless exercise.

Walking up from *Chestermans Road* we noted that much of the new shortcut track had been obliterated by recent lyrebird scratchings. We were soon trekking along the track towards *King George V Cave*. It follows the path of an old tramway converted in to a walking track in 1930's for the sole purpose of taking guided tourist visits or expedtions to *King George V Cave*. We branched off uphill and began our ascent to Wolf Hole passing many different coloured track markers on the way, arriving at the massive *Wolf Hole* collapse entrance barely 15 minutes after leaving the car.

Suunto Vector Watch. ***Image by Jamie Allison***

Arthur rigged the pitch with a 40m x 11mm rope anchored to the nearby tree. He looped the rope three times around the tree and tied it off with a bowline. A half-hitch tied back to a Karabiner from a double looped wire trace placed around the tree served as our backup anchor. Arthur descended first so he could photograph my descent using his digital camera. I zeroed my Suunto Vector altimeter watch and descended using the STC Petzl stop that I hired from the STC gear store. I deliberately left my rack at home to try one of these fancy descenders for myself. It worked really well on the dry 11mm rope; I experienced no creeping when posing for a photo mid-way down the pitch.

Once at the bottom of the pitch my watch indicated we were at minus 30m. We removed our SRT gear and stowed it where we could find it on the way out, entering the cave at the far end of the entrance collapse (rather than using the quicker, more vertical entrance down the steep mud bank just under the under the main pitch). We traversed the 270degree cave passage circuit around the entrance collapse consisting of walking passage and a



Arthur and a suspended floor formation near the entrance chamber. ***Photo by Jamie Allison***

few crawls under short stals into the main entrance chamber. A quick check of the altimeter watch revealed that we were at minus 35m. The Suunto Vector measures altitude by measuring the changes in barometric pressure (1m = 0.12mbar) and has a resolution of 5m. We proceeded to checkout some calcified mud platelets and a suspended floor formation in the LHS passageway and then investigated two vertical sections that Arthur had reported in the last *Spie*l. We later found out that these shafts, which lead to a stream passage had been explored 2-3 years ago by Tim Anderson and his students (see Tim's report in this edition). Above the RHS vertical hole, we found some tight passage requiring a climb heading upward into a near vertical streamway passage through a rockfall that may lead to another entrance. Heading out and back into the main cave we spied a maze of passages and chambers going off in different directions. Along the way, we had a brief look at some side chambers including a straw chamber with its shields and splayed straw clusters (shown on the cover of last *Speleo Spiel* #318). We then followed the main drag fissure passage to a final chamber just before *Lake Pluto* noting the rock fall passage to RHS of this chamber where Tim Anderson's new extension passage goes out to the "*Surprise-Surprise*" area.

Into *Lake Pluto* we noticed the very low water levels, exposed silt mud banks and no water emerging in overflow channel. Arthur pointed out the *Anaspides* were still doing their thing – dive-bombing from the water surface into silty substrate of the lake floor. We made our way around the LHS bank of *Lake Pluto*, passing some impressive 1.5 to 1.8m high totem stalagmites, then down to the muddy shoreline where we reached the lakeside wall. We gingerly plodded into the deep mud and lake water, continuing around the LHS wall admiring the many formations as we eventually waded thigh deep through the cool water. Toward the opposite wall a number of 3-4m long straws were observed. They were about 0.3-0.4m from the water and we guessed that during normal high water conditions, the straws would just about touch *Lake Pluto*, stunting their further downward growth.

Cracked mud bank at Lake Charon, inside the recently dug out squeeze. ***Photo by Arthur Clarke***

Exploration beyond *Lake Pluto*: which way to go? We checked the altimeter: it read minus 35m, the same as the first main chamber in from the entrance collapse. Up and over a small rockpile, we headed off almost straight ahead into a breakdown passage (not known to Tim) in a 2m wide fissure leading to two choices. Firstly, a chamber with sloping passage narrowing to 6m wide sloping chamber formed by large bedding (??) slab that had collapsed from ceiling – with gypsum crystal growths and short gypsum speleothems. This was followed for about 70-80m or more up a 5-10 degree slope.into a 2-3m wide area and breakdown, where the passage appears to keep going, veering right. Back-tracking a bit, we found two entrances from the fissure passage leading down to 2.0-2.5m high, mud-floored passage area at a level lower that *Lake Pluto*. Judging by the presence of numerous mud-cracks, it maybe another overflow route for waters from *Lake Pluto*; several down-sloping mud passages where looked at – some leading downwards into sump like passages that we did not explore, though some draught was felt while we were there. Another feature in this mud-cracked floor side chamber was the presence of 15-20cm long paper-thin box work rock-weathering residuals "hanging" from the ceiling and walls. We then headed out to the chamber behind *Lake Pluto* and followed the LHS passage.

The LHS passage appeared like it could contain a small stream that might flow into *Lake Pluto* during the right weather conditions. After a little walking we were stooping, then crawling along more mud-cracked passage and eventually an almost dead flat flowstone floored passage – appearing almost like a frozen lake surface. Elbow pads might have been handy here. The flowstone had a fairly ingrained muddied surface, so we definitely weren't the first there. We continued along and into a maze of more mud-cracked passage, passing little clay lumps (possible track marker cairns) searching for the elusive "*Lake X*" (now named as *Lake Charon* by Tim Anderson and party). Following a flattener passage, passing some snow-white fine crystal speleothems and another maze of mud tunnels with mud-crack floors, which appeared to be overflow channels conducting water from *Lake Charon* to *Lake Pluto* and probably sometimes full of water, perhaps up to the roof. Eventually we came to Tim Anderson's recently dug out sump passage: we burrowed through, pressing our chests into the floor and backs against the roof till we came out on the mud bank shores of the new *Lake Charon*.

This new lake is quite impressive: almost jet black water: like Indian Ink. In the distance there were lots

of straws all extending down to about 0.5m above the water level. There was just enough room for two of us to sit or lie in reasonable comfort beyond the dug out sump. The lakeshore was surrounded by this same mud-cracked surface but here lead down to a steep and compacted slippery slope leading into the lake. The top part of this steep bank below the mud-cracked surface was about 0.3m above the waterline. However, just sitting there it gave Arthur the feeling he was going to slide down into the dark depths, so he decided to part company with his digital camera. A wise move! Arthur decided to gingerly edge his way along the RHS of the lake, avoiding the straws by crouching down under them, half lying in the waist deep water, establishing a shoreside grip by digging his fingers into the deep mud bank cracks. Seeing the apparent ease of his progress, I followed. The dark black tannin coloured water, was very cold and quite deep: we imagined it might be over head-deep in places. Near a right hand bend in the lake, there was a shallow spot, barely knee deep leading ashore to a large spacious 5-6m high, 10-15m wide, chamber with lots of straws, stals and shawls and yet another pristine mud-cracked floor. It looked too pristine to enter, so we left it for Tim or whoever feels content to leave their first imprints in this untouched domain.

Jamie Allison knee deep in the back end of Lake Pluto ***Photo by Arthur Clarke***

Near this juncture, the roof straws became quite dense near the lakeshore, so we had to venture out towards the centre of the lake to avoid damaging these slender growths. The straws were quite amazing: all sorts of shapes, some with horizontal growths; one lot even shaped like a chair. Between the straws there were smaller stumpy helictites. Venturing into the cold, deep water with treacherously slippery, but compacted underwater mudbank, we were now in chest deep water. Though Arthur had less reason to complain – being taller he could maintain his balance by stretching up his hand to form a finger compression support grip on the cave ceiling. Strange how the water seems to feel colder when it's over your genitals and lapping above your stomach and up around your chest. Arthur reckoned he could smell something slightly sulphurous, like the smell of "rotten-egg" gas – perhaps coming from decomposed vegetation in the water. Venturing on and veering right in the banana-shaped lake, we were almost in the centre of the lake where it appeared to be a scour channel. It gradually became shallower as we neared the end, coming out in a mud-floored inflow stream passage. This 1.8-2.0m high, 2.0m wide stream passage, had 8-10cm rounded cobbles embedded into the mud laden streambed floor; the stream banks were composed of grey-coloured, roughly bedded, relatively loose small flaky pieces of mudstone, similar to the sediment along the banks of *Lake Pluto*, but larger. Arthur reckoned we should be leaving this passage for Tim and his students to explore. I ventured a little further on to a bend in the stream channel where I could see a long straight passage extending for another 10m or so. Time to leave: it was getting late and I was keen to do my first SRT prussiking.

On our way out, we attempted a little more cave science - noting the altimeter readings from my watch. The shore of *Lake Charon* was reading minus 50m below the surface; when we reached *Lake Pluto*, it had dropped to minus 55m. Back out to the chamber just inside the entrance collapse it also read minus 55m, where it had read minus 35m on the way in. The air pressure must have changed. (the altimeter should be recalibrated when passing a known altitide) Prussiking up the rope was quite taxing; it is a good thing the 30m pitch has a 45degree slope near the top that you can walk up with the assistance of your SRT gear. At the top of the pitch beside our rigging tree the altimeter was reading minus 20m. At least this little science exercise would seem to confirm two things: firstly *Lake Pluto* is 35m below the entrance rim. Secondly, *Lake Charon* is slightly higher than *Lake Pluto* and no doubt in times of higher water levels, it drains into *Lake Pluto*, which itself has an outflow channel at the approach end and an overflow at the backend – where the lower level mud-cracked floor with box-work ceiling is.

After Arthur had his emergence victory smoke, we de-rigged the pitch and headed for the car. We soon discovered that there weren't enough tapes along the track to find your way out at night with ease. Arthur got bushed and headed down hill too soon to do battle with the ferns and fallen logs. Just as well that I was carrying the rope! Eventually we reached Arthur's Magna around 9pm. It was an eventful afternoon / evening: getting beyond *Lake Pluto* and performing a little cave science as well.

Jamie Allison in the dug out section before Lake Charon. ***Photo by Arthur Clarke.***

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