Cover Photo:
"Jim" in the streamway in Welcome Stranger (JF229).

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. 309, Jul-Aug 1998

CONTENTS

Editorial

Due to my recent accident (there is an Incident Report in this issue) I have much more bum-on-seat time than I would like, but at least that augurs well for editing the Spiel (a task which I have taken on upon the resignation of John Hawkins-Salt). Of course, it goes without saying that I'd rather be caving!!

You will notice that this Spiel has a new look (following the good example Dean Morgan set with the last Australian Caver), **Col um ns** and **smaller print** allow the same information to be fitted into *less* space (hopefully without uNd**U**e *E***y**estrA**i**N to readers!) which saves on publication costs.

Within this issue you will find a wide variety of articles, ranging from Hidden Secrets (no, not a discussion of cavers lingerie), local history, a caving accident, advanced caving techniques and even some good squalid caving. There should be something for everyone. If there's **nothing to your taste**, then why don't you **take the lead and write something** yourself. The Spiel will only be as good as the articles provided to the Editor to include.

By the way, several people have quizzed me about the cover shot of the last Spiel ... yes it was an old photo ... it happens to be a very youthful Jeff Watson on the last pitch (68 m) in Dwarrowdelf.

Jeff Butt

Club Matters

ADVANCE WARNING of the ANNUAL GENERAL MEETING. 8 P.M. Wednesday 4th November at the GEAR STORE, 22 Clutha Place, South Hobart, 7004. Please park in Clutha Place itself, instead of blocking up the 'slip-road'.

Agenda Items for discussion should be presented to the Secretary no later than October 4th. (Oct. 7th is the last business meeting prior to the AGM).

Proxy Votes or Proxy Nominations will only be accepted in writing, or by email and should be presented to the Secretary prior to the meeting. If being submitted by post (to STC, P.O. Box 416, Sandy Bay 7006) these forms should arrive by 5 p.m. on Tuesday November the 3rd. A form for doing this is included on the last page of this Spiel.

FEES to Rise??? Our Treasurer has submitted a detailed report about the Fee Structure to the STC list server. The proposed new fee structure is:

- Full Members: $45.00 ($35.00 PPD*)
- Household Membership: $65.00 ($52.50 PPD)
- Student/Concessional/Unemployed Members: $35.00 ($27.50 PPD)
- Prospective/New Introductory Members: $15.00 (no PPD)
- Life members (with full ASF Membership) $20.00 ($15.00 PPD)
- Life members (with Aust. Caver only) $15.00 (no PPD).
- Spiel Subscription $20.00 (no PPD).

[*ppd=prompt payment discount. This is the amount you pay if your subscription is paid within 3 months of the AGM].
This is one item that will be voted on at the AGM.

That **SEARCH & RESCUE QUESTIONAIRE** included in the last Spiel has raised a few comments.

One of the main ones is that people don't want to rip this page from their copy ... evidentally the Spiel is valued! So in this issue you will find a loose copy (two for Household members) of the Questionnaire. If you haven't already done so, then please fill it in and return it as soon as possible.

Another comment is, "Why is there a skills checklist?" Well, the reason for this is to help you realise where you are at with your own skills; are there any skills that you should acquire or revise to ensure you are up to speed, and so on. Note that a Search and Rescue call-out is not the appropriate time or place to practise and learn skills, it is the place where well practised skills are utilised to maximum advantage!

SHUFFLED POSITIONS.

With John Hawkins-Salt leaving the state John hads divested himself of his various STC jobs. Dave Rasch is going to maintain the Html Archive of publications and the List Server; Hans Benish is going to maintain the Web Page and Jeff Butt is going to Edit the Spiel. **John, it is taking three people to replace you ... you have done a mammoth job for the club. Many, many thanks for your energy and enthusiasm for things Computer based and Speleological!**

Due to work pressures Kelly Miller has had to resign from the Secretary's job. **Kelly has done an outstanding job for STC, thank-you very much for being such an efficient and thorough Secretary!** We hope that things settle down a bit for you with your other endeavours. Liz Canning has taken up the Secretarial position. The transition should be very easy due to the very good state that Kelly has left things in.

FORWARD PROGRAM:

Meetings: (held at the Shipwright Arms Hotel, Battery Point)

September 16:	Social gathering @ 8 p.m. Albert Goede will show some slides of his recent caving exploits in Western Europe.
October 7:	Meeting@7:30 p.m.
October 21:	Social gathering@ 8 p.m.
November 4:	**ANNUAL GENERAL MEETING**@THE GEAR STORE, 22 Clutha Place, South Hobart. 8 p.m. Refreshments provided.

Trips: (Please contact the Organiser of any trip for more details.)

September 12:	Risbys Basin Cave-a Science trip with Jol Desmarchelier 62299731 (h).
September 19:	Frankcombes Cave-another Science trip with Jol 62299731 (h).
September 19/20:	Wolf Hole/Midnight Hole. Hugh Fitzgerald/Liz Canning 62343035 (h).
September 26:	Exit Cave-track marking in the Hammer Passage/Ballroom area. Ian Houshold 62333868 (w), 62390191 (h).
October 3/4:	Croesus and Lynds Cave. Limited numbers. Andrew Briggs. 62443884 (h).
October 10:	Ida Bay-remarking surface tracks on Marble Hill. Ian Houshold.
work out a date:	Lost Pot. Steve Bunton 62782398 (h).
work out a date:	Flick Mint's (bottom & derig.) trip. Jeff Butt (organising only). 62238620 (h).

Midnight Hole-La Technique Cordelette-5/7/98

Party: Jeff Butt, Dave Rasch.

If anyone reads Vertical, by Al Warild (Chapter 5) you will find information about La Technique Cordelette (The Cord Technique). Briefly, for this method you re-use a single rope, one end of which has a stopper knot and the other a tapered 'rats-tail'; after descending a pitch you use a light cord to retrieve your rope from the rigging gear (left in-situ) and leave a double loop of cord behind. The 'rats-tail' facilitates the reinstatement of the rope for the ascent. Dave almost had a go at this technique a few years back, but was put off by the cost of buying a few hundred metres of venetian blind cord.

Anyway, maybe it is age that makes one dislike carrying lots of rope, and as we are both approaching one of those "0" years, we thought it was about time to try it out. On the occasion of a certain x-caver Mr. Jordans "0" celebration we were toying with the idea again and thought about trying to do it on the cheap by using dental floss for our cord; this was then upgraded to Whipping twine (much stronger), but common-sense eventually prevailed and after a trip to K-Mart I ended up with an armful of skeins of 3 mm Orange poly-pro ($6.95 for 61 m). Dave added a rats-tail (a 3-handed job!) to a piece of 9 mm and we were set.

We chose Midnight Hole as our test cave, it has nice clean pitches, plenty of bolts giving free hangs and has the added advantage that if we stuffed up, we could exit the bottom and clean up our mess afterwards. We carried an extra 9 mm rope to allow for this contingency.

Excluding our reserve, we used about 90 m of rope (our 49 m rats-tail rope and several short pieces (3-7 m) and one 20m piece for rigging pitch-heads) and 250 m of poly-pro, all up, about half a pack's worth of gear each. The poly-pro skeins results in lots of 'I want to tangle' coils, but with care we managed to avoid any such tangles. It would have been better to de-skein the poly-pro and wind it onto spools prior to the trip. Once you cut the poly-pro you have to be incredibly careful not to let it go, lest it 'sproings' up out of reach, in which case you'd be stuck!! [Venetian blind cord is not a laid cord like the poly-pro; it would have been a better, but more costly choice.] All joins in the cord, and attachment to the rats-tail were made by a simple round-knot, this knot is flat on one side and so easily slides through a maillon.

For all pitches (except the 4th pitch (8 m)) our cord maillon was connected to at least two anchors. A "Y" belay was used for the entrance pitch (21 m), giving a rub free descent. For the second pitch (11 m) we placed the cord maillon at a deviation adjacent to the lip.

On the third pitch (39 m), it was a weird feeling to be dangling from a free-hanging 'Y' belay (a short rope traverse over the top of the pitch leads to two bolts, on opposite walls) on a rope which is held by a knot (double figure 9, with a krab in and poly-pro attached) against a maillon. It looks exceedingly tenuous!! Prussiking up on the same arrangement is also a strange feeling, but at least then it's out of sight, out of mind! However, you soon get used to this new style of rigging.

The short 4th pitch (8 m) was corded directly from the eyebolt. For the 5th pitch (34 m) there is a ledge/rub-point half way down, when you SRT this cave one normally puts a rebelay in here. As it was not possible to use a deviation instead of a rebelay, we used fixed rigging (using 20 m rope) to this point and then corded the bottom half of the pitch from the rebelay.

The final 49 m pitch was corded from the Petzl hanger on the left hand wall, backed up to the eyebolt. A small deviation was used about one-third of the way down for a total rub free rope. Warild states that 40-50 m is the limit for the cord-technique. We had no trouble re-threading the rope on this pitch, but a considerable force is needed to hoist the SRT rope back up. [The strength of your cord and how much it cuts into your hands are probably the main limit on the pitch length. You might be able to sneak this method up to 70 m using the poly-pro in ideal circumstances.] Once the SRT rope is more than half way through it's own weight completes the re-threading job and one has to use the cord to control the rate that this happens. We soon learned this as our first uncontrolled re-threading ended in a whack to the rigging! Also, if for some reason you aren't sure if everything has homed correctly, the attached cord lets you retrieve the rope again and have another go.

Everything went extremely smoothly, no tangles, no rope re-threading problems-it was a dream run. We were both quite impressed by this technique. With two people it was very time efficient, there was virtually no waiting around. Whilst one person did the rigging/derigging the other person looked after the winding/unwinding of the cord.

But before you rush out to try it, please note that it is a committing technique and one needs to be exceedingly careful and diligent with rigging and cord handling to avoid any problems. There is little margin for error. If you are a rough and ready caver, or prone to being a bit "slap-dash" with rigging, then don't even consider trying it.

Jeff Butt and Dave Rasch

Building New Fixed Ladders for Growling Swallet-8/7/98

Working Bee: Hans Benisch, Jeff Butt, Liz Canning, Leigh Douglas, Hugh Fitzgerald, Dave Rasch, Tony Veness.

The 40 mm PVC pipe we bought some time ago was finally transformed into rungs, not without difficulty I must add, it had a strong tendency to chip and crack if there were too many revs on the drill. Nimble fingers fitted and knotted 9 mm rope to these rungs and by the end of the evening the three ladders (5.5 m, 7 m, 8 m; as per a recent measurement of the old ladders) were 80% done.

The arrival of some rain put a timely end to the (un)sheltered workshop and we retreated to sample the mulled wine used to attract the willing workers.

In the daylight the next day the last rungs were made and the ladders

finished. Many rungs unfortunately needed a slight adjustment to get them horizontal, there are some disadvantages of working in the half-dark! It was probably wise that the glu-whein didn't come out till the end of the evening too!!

Many thanks to all who turned up to lend a hand to this task. As always, a few extra hands make the job a lot easier and a lot more fun.

All we need to do now is to install them!

JB

Flick Mint's Hole (JF371)-three strikes and you're out!

"Strike One"-(27/6/98)

Andreas Galambos, Dave Rasch, Hugh Fitzgerald, Liz Canning, Jeff Butt.

Finding the entrance was easy, as we had done a 'find the hole and retape the track' trip on 8/6/98. The entrance pitch was rigged and we (Dave, Andreas and myself; Hugh and Liz were planning to come in later and do some surveying, but they opted to do other things) were soon amazed at the spaciousness of the chambers down below. In fact there is so much spaciousness that one thinks that just walking on the surface above this hollow hill is a rather dangerous thing to do! Anyway, since none of us had been here before, the correct route wasn't immediately obvious. There were several 2nd pitches (3 in fact), one wet and undescended, one which was bypassed by moving some rocks and the third one turned out to be the right way.

We located a couple of drafting holes, suitably small and grotty and Dave soon found that the second one was "The Cramps". This obstacle is like an extended (about 3 times the length) Matchbox Squeeze with an annoying pack-grabbing and boot biting gutter in the bottom, as well as having copious amounts of mud-it's got it all. With a full pack this obstacle is a bit of a grunt. Anyway, we soon located the 55 m third pitch (see the Survey published in Australian Caver No. 115). One has to half lie in the small streamway to squeeze through a window into the side of the impressive 55 m shaft. Dave went through first but couldn't locate the bolt. He returned to let me have a look. I managed to spy a rusting hanger on the wall next to a small alcove. The steel bolt was rather rusted and the hanger a little pitted. Removal of the hanger revealed that the casing appeared to be in good order. However, given the size of the shaft below and the many sharp bits of rock between the pitch head window and this bolt I decided to place a second bolt (about 50 cm to the right and 30 cm lower than the existing bolt) to make everything a bit more secure. A trace and a long tape were hung from these two bolts to give an abrasion free rebelay 2.5 m down. The pitch is very spacious and a little damp. Everyone came down for a look, but then upon consulting our watch it was time to exit so that we could get back to Tyenna Valley Lodge (TVL) to celebrate Liz's birthday.

We were late back to meet Hugh and Liz, and late back to the TVL, but fortunately not too late to get a feed; many thanks Tim and Wendy for being so accommodating.

"Strike Two"- (28/6/98)

John Hawkins-Salt, Kai , Jeff Butt.

John and Kai turned up at TVL at the agreed time, but of course those at the TVL were only slowly easing into the day. At the end of the Eight Road, I opened the boot of the Orana to get the gear, and the immediate reaction was to close it and go home as our gear from yesterday was particularly grotty, wet and mud-caked; just as we left it yesterday. John said that he wasn't envious of us. With some grimmacing we en-robed our grotty garb and headed off to Flick Mint's; for some reason it seemed a lot colder than yesterday. Dave's digestive system got the better of him and after 4 stops en-route to the cave he decided not to go in. Andreas felt cold in his wet gear and decided to stay on the surface. At least we still had three, and so soon John, Kai and myself were down the first couple of pitches.

Off and on, John was muttering about having a bad feeling for the day. Someone must have been listening, as John had the misfortune of pulling a piece of rock down onto his face in the first part of the Cramps. **(The lesson here, is that it is unwise to go for handholds above your face or head.)** Luckily the rock missed his eye, but did leave a deep gash just above his eyebrow, and resulted in a copious flow of blood running into his eye. John backed out and I came through with the first aid kit. We washed the wound using a convenient micro-waterfall and applied a bandage to stem the flow of blood into his eye. Apart from a getting a bit of a fright, John was okay, but that was it for the day and so John and Kai started to head out.

I decided to go down and have a quick look at "Hammerlock", before heading out, thinking that I may as well be doing something instead of just waiting for my turn on the ropes above. I then did the Cramps for the third time for the day and went down the 55 m pitch. I rigged the next 8 m pitch (which is actually the last part of the 55 p). I was expecting to find the Hammerlock, but instead found another short pitch. I did have rope for this, but I decided that Flick Mint's wasn't the nicest of caves to be soloing (a practise that I rarely do and don't really condone!), and so opted to return to the surface.

Dave and Andreas had been having a good look around the area and found a couple of new holes, one with a good draught and an impressive first drop. This hill is indeed quite hollow. Given the proximity (~100 m) of it to Flick Mint's, one can't help but think that it probably just rejoins FM, but then you never know.

"Strike Three"-(17/7/98)

This trip, like Strike 2, did involve an actual Strike; this is discussed in a separate article in this Spiel.

Jeff Butt

4 sale

• Cumbrian fibrepile undersuit. Medium size. As new (worn only once), $80 or best offer.

• TROLL waterproof Trog-suit. Used, but in a well cared for condition. There's a lot of good caving left in it! Small (size 2). $50 or near offer and it's yours.

for either, contact the Editor

HIDDEN ASPECTS: Cave Art drawings by June MacLucas - Burnie Art Gallery.

Party: Robyn Claire and Arthur Clarke

[All STC members were invited to the opening of this Art Exhibition. Robyn and Arthur took up this invitation. Ed.]

"…….. to the uninitiated, caving embodies all the hallmarks associated with deranged lunatics pursuing masochism to the ultimate. Combine this with the need to sketch from perilous positions in total darkness and you have a situation fraught with absurdity." [from David Bellamy: Member of the International Society for Speleological Art]

It should be said at the beginning that the President of the Burnie-based Savage River Caving Club (SRCC): Bevis (Fred) Dutton had found some good clobber to wear for the opening of the June MacLucas art exhibition in Burnie, despite the fact that art exhibitions weren't Fred's cup of tea. SRCC's Secretary (Dave Heap) had also worn his best gear and Arthur had even changed into a less grubby pair of jeans. After all, the especially prepared mannequin caver at the centrepiece for the exhibition, was all trogged up (along with "laid" rope) adding caving style to the occasion.

David Wools-Cobb (of Northern Caverneers), opened the exhibition on Friday night, August 7th; he spoke of the wide variety of reasons why people choose to involve themselves in things subterranean, the richness of caves and the rigour required by cave artists such as June, to follow her passion for drawing and painting caves - many of the artworks being completed underground.

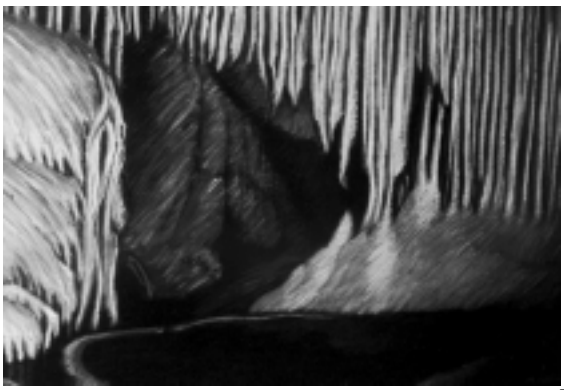
Elery Hamilton-Smith (1997b) describes June MacLucas as the "…..heir apparent to the 19th century artists of Australian caves…." Worldwide today, there are about twenty cave artists painting seriously. The renown environmentalist: David Bellamy is one of these cave artists. David's artwork blends science with the aesthetic in an accurate portrayal of cave interiors. Other cave artists sometimes draw from the awesome tasks involved in caving, the stamina and endurance of cavers (Anon., 1993). Some are inspired by the mystery and beauty - some, the humour.

Fear motivates June MacLucas artistic response to caving and her resolution of that fear. Feelings of claustrophobia, hypothermia, falling and the darkside inform her work. Yet, rather than being foreboding, the drawings are vivid, almost celebratory. Through colour, line and bold forms, her drawings engage the viewer in the sensory and visual experience of caving.

This is June's ninth cave art exhibition in five years. Some 24 Australian caves are represented in the Burnie exhibition of thirty paintings (which June prefers to term as "pastel drawings"). There are eight paintings of Tasmanian caves: Croesus Cave*, Ghenghis Khan, Kubla Khan*, Honeycomb Cave and Wet Cave - all at Mole Creek, and the Growling Swallet* entrance at Junee-Florentine. Main-land cave areas featured in the exhibition are Alice Springs, Abercrombie, Flinders Ranges, Mt. Gambier, Nullarbor, Uluru, Wombeyan and Yarrangobilly. [*which accompany this article.] All the paintings from the areas in NSW and Nullarbor were completed inside the caves; others including those from Tasmanian caves depicting water scenes were finished off outside the cave - with the aid of photographs taken on site by June MacLucas and fellow cavers.

The Burnie Art Gallery acquired four of June's paintings: *Goat Cave* and *Thampanna Cave* - both from the Nullarbor, *Castle Cave* at Yarrangobilly, plus one from Mole Creek: depicting a detailed section in the *Pleasure Dome* of Kubla Khan. Two other Mole Creek paintings were snapped up by cavers who were amongst the 40-50 patrons attending the exhibition's opening night: the *Key Hole* (in the *Master Lock*) of Croesus Cave was bought by Arthur Clarke (with apologies to Dave Heap) and the painting of the gour pool section of Croesus Cave (below the *Golden Staircase*) was bought by David Wools-Cobb.

June has produced over a hundred paintings and drawings of Australian caves. She has used several art mediums including oils on canvas, plus a



mixture of shellac, wood dyes and oils, and her present method with pastels. Relating her current technique, she describes it as a mixed media of pastels and charcoal over an acrylic wash on Italian paper.

June's method of layering colour, beginning with an acrylic wash and building up layers of pastel, is suggestive of a cave environment: the solution of limestone rocks and the layers of deposited calcite. The layering of pastel colours makes these art works look like paintings. The quick strokes in applying the pastels create the notion of glimpses, as light catches form in the half-light - then disappears. She contrasts delicate lightly toned cave formations with darker pools and streamways adding mystery to the recesses and what lies ahead.

In his recent article about early cave art in Australia, Elery Hamilton-Smith (1997a) discusses the writings of eighteenth century essayist, Burke who spoke of things which frighten us by scale or mystery, but can be transformed in our minds into something beautiful. As Dave Rasch observed last weekend while caving at Ida Bay in Arthurs Folly (IB-110), when Robyn Claire froze at the thought of crawling through a cold, muddy and watery passage up to her neck, then later being distracted by some stunning cave formations "……its amazing how the mind edits out the not so good bits." Such is the alchemy of caving.

June's pastel drawings are strong, well drafted evocative images, relying on the individual artist's own perceptions, but resonating with Robyn's novice caver's impressions and responses. The exhibition in Burnie is well worth a look - and runs till September 20th.

Although this is the first known cave art exhibition in Tasmania, there have been a number of other Tasmanian "firsts" in the history of cave art and cave maps in Australia. The first known cave map was Henry Hellyer's 1827 map of Rocky Cape (North) Cave in northwestern Tasmania (Middleton, 1990). A Mole Creek site featured as one of the early published pictorial representations of a cave in Australia, when an engraving of Oakden's Cave, near Chudleigh, Tasmania appeared in the *Illustrated Australian News*; Number 254, September 3rd, 1877 (Hamilton-Smith, 1997b). [This cave is better known today as part of the Wet Caves/ Honeycomb Cave system and are probably the "caverns" reported by James Backhouse in January 1833, which he explored "… with a torch of burning bark .. (located upstream from the) "… Moleside Marshes ... (near) ... the Moleside River ….. subterraneous in places." (Clarke, 1986)]

References:

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Clarke, A. (1986) Early cave exploration in Tasmania. *Tas. Cave & Karst Res. Gp., Circular* No. 5 (October 1986): 1.

Hamilton-Smith, E. (1997a) Perceptions of Australian caves in the 19th Century: the visual record. *Helictite,* 35 (1&2): 4-11.

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Middleton, G. (1990) Rocky Cape North Cave: an early cave map from Tasmania. *Jnl. Syd. Speleol. Soc.*, 34(11): 213-216.

Robyn Claire and Arthur Clarke

Prospecting a new slot (JF-x???) near Flick Mint's Hole.

Party: Andreas Galambos, Dave Rasch.

On 28/6/98, for a variety of reasons, Andreas and I opted out of going down Flick Mint's Hole (JF371) and instead went for a wander along the contact to the left of Flick Mints Hole. We visited a few tagged holes including "Mongrel Pot" (JF370) and "Slimy Slot" (JF372). We also climbed a couple of metres into several draughting holes that were both too tight. It's an interesting area.

Andreas wandered down the hill and found a slot (about 100 m from Flick Mint's), that looked like a definite possibility. It was about 3 m long by 1 m wide with some leaf litter blocking most of the entrance. It is a real person-trap, being virtually impossible to see from the uphill side even on the lip. We tossed a couple of rocks down the entrance pitch, judging it to be about 15 metres deep. It seemed to be draughting quite well. Because its location was about mid-way between Flick Mints and Serendipity, we became quite excited about huge cave connections and wanted to return soon.

On 26/7/98 we returned (with Liz Canning and Hugh Fitzgerald). Hugh and Liz did some surface exploration, while Andreas and I rigged the first pitch of the new cave. The first pitch proved to be about 15 metres, followed almost immediately by a second 3 m pitch into a chamber about 2 m wide. The cave (not yet numbered; it should be temporarily assigned an "X" type number) retained the character of a slot about 20 metres from end to end. There are huge numbers of animal bones, testimony to the deceptive entrance.

In one direction we managed to down-climb a 3 m hole then down through wedged boulders to a small streamway. From here things started getting tight. We both had a go pushing horizontally feet-first downstream over the skull of a largish carnivore (probably a devil?) but only managed about 4 metres with further progress unlikely here. As Andreas was re-emerging from the squeeze, I remember hearing his heart thumping really loudly through the cave due to weird acoustics.

Back in the chamber below the 3 m pitch, we headed horizontally in the other direction, an upstream continuation about 15 m to some nice flowstone decoration, before the slot stopped. On the way back I found a particularly large leg bone that looked like the femur of a large hopping animal. This bone was removed for identification purposes.

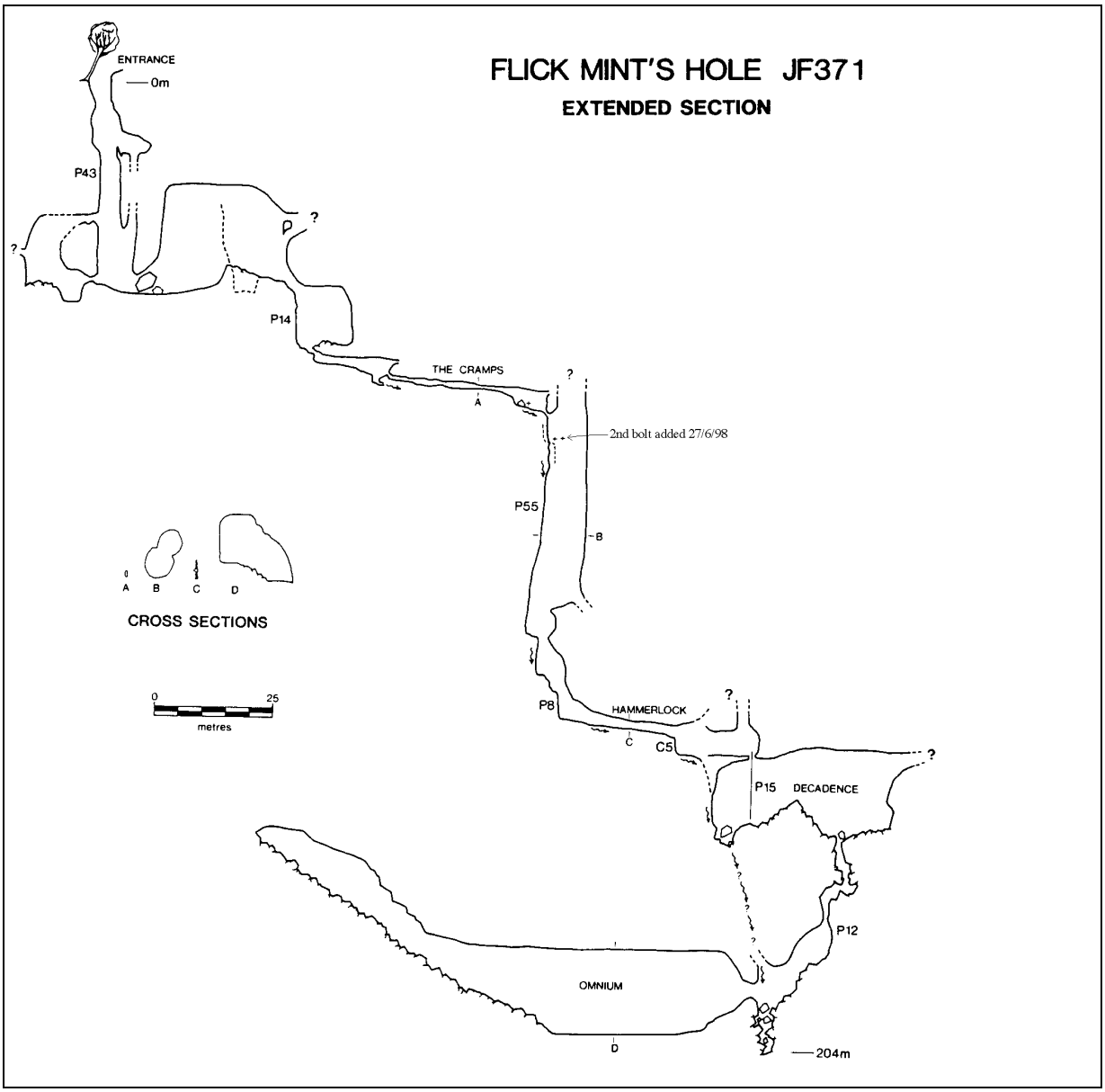
There are no prospects for this slot. Total depth is about 30 metres. It's quite disappointing really in view of its location.

Dave Rasch

Analysis of an Incident (17/7/98) in Flick Mint's Hole (JF371).

Party: Damian Bidgood, Jeff Butt, Hugh Fitzgerald, Dave Rasch.

There is no such thing as a good cave to have an accident in, Flick Mint's Hole (FMH) **is amongst the worst of caves** to have a serious accident in. I was very conscious of this fact, having visited this cave twice over the last month. FMH is fairly sporty, has several large pitches and a couple of long and awkward body size constrictions ('The Cramps' and 'Hammerlock', see passage cross-sections "A" and "C" in the following survey-from Australian Caver No. 115, 1987). Getting a badly injured person through these would be verging on a logistic impossibility.



Our party was a well equipped and experienced caving team; the fact there were four of us made this perhaps one of the safest trips I have been on; the vast majority of my caving trips having been conducted with a party of two.

Whilst we walked to the cave we were discussing the merits of taking a more substantial first aid kit on trips, and leaving it at the entrance, or in the vehicle. I mentioned that for dependent groups (e.g. school groups or novices) I carry a significant first aid kit underground with me and that I also have an emergency kit (sleeping mat, sleeping bag, stove and hot drinks) stashed in the car. When caving with peers, I normally only carry a small Emergency Kit underground and hope that my peers carry likewise (but despite occasional badgering, I know that they often don't as they know I've got one!!). I would like to reprint an extract (see below) from "Caving Safety 1-Course Manual", by Butt and Morgan (1996) to remind everyone of the ideal world.

Anyway, back to the trip. We rigged the entrance pitch and started in at about noon. The next few pitches were already rigged and the trip was going very smoothly. Damian and I travelled as a pair at the front, rigging pitches beyond my last trip's turn-around point. Dave and Hugh were doing some surveying as

they descended behind us to avoid 'cavers waiting'. At about 150 m below the surface I had rigged the 15 m pitch into 'Decadence'. The rigging consisted of three anchors, two equally loaded small jugs about 1.5 m above a rebelay using a projecting block at floor level. All three anchors were given the twice over; the lower block was given two solid kicks and I judged all was safe. For those who know me in a caving sense, I am very cautious, especially with anchor selection and verge on being pedantic with the rigging. The rigging was well adjusted and the rebelay was a tight one (i.e. no loop of rope, as there was a small ledge to lean against to cross it).

Damian descended the pitch safely. I commenced my descent, about 1 m below the rebelay one emerges through the ceiling of the large chamber 'Decadence'. From this point one is totally free hanging, like a spider dropping from the middle of the ceiling. As I passed through the floor/ceiling I did examine the lower anchor from below and remained happy with it.

I was about 8 to 10 m down admiring the view, when I simultaneously felt and heard a big crunch on my helmet and thighs. (This was about 3 p.m.). It goes without saying that if you hear a noise above resist the natural tendency to LOOK UP. If at all possible shelter, or make yourself a small as possible object (i.e. hide under your helmet!)

Everything went black as well as the impact turned off my headlamp (I think a rock glanced it as the bracket was slightly bent). The sound of falling rocks and the blackness made Damian somewhat concerned below (he initially didn't know what had happened, had I fallen, or was I unconscious on the rope). He was somewhat relieved when from above I yelled that "I've had a 'direct hit", as it meant that at least I could still yell and that I wasn't in a crumpled heap at the base of the pitch.

The anchor that failed was about 25 cm by 30 cm, by 30-50 cm deep, and in total would have weighed some tens of kilograms. I am not sure how much of it let go and headed my way, but Damian did find two fresh football sized rocks. A football sized piece of rock would weigh in the vicinity of 5-10 kg.

Falling 8-10 m would take about 1.2-1.4 seconds and give it a velocity of something like 45-50 km/hr. That's quite a bit of energy!!

2.5 Personal Emergency Gear

It would be an ideal world if we all took our First Aid kits underground with us, but in reality not that many people do. I think that this is mainly due to pack size restrictions and the amount of space available after fitting all of the other gear in. Just make sure that at least one party member has a First Aid kit, and the training to use it! Also a more substantial first aid kit can be left in the car (if close by) or at the cave entrance, but on longer trips it should travel underground with you!

Here are a few other personal items that every caver should take underground with them as personal equipment:

- *First Aid Kit, (at least one per party),*
- *Spare clothing (jumper, balaclava in case you get cold),*
- *Food (to keep you going) and water (if a dry cave),*
- *Space Blanket/Survival bag (to keep you warm. The advantage of a survival bag over a space blanket is that you can put a person inside a survival bag, and with a space blanket you can only wrap it around the person. Get a Survival bag if you can.)*
- *Candles (to provide heat under a survival bag),*
- *Spare globes for your light (for obvious reasons),*
- *At least 2 spare light sources (for obvious reasons),*
- *Matches or a lighter (to light the candles),*
- *Electrical tape (for repairs to lights, to seal up tears in your trogsuit, as an emergency bandage, or for track marking),*
- *Swiss army knife (light repairs, minor surgery, etc.),*
- *Emergency high energy food such as Chocolate or Glucose tablets,*
- *A watch (to keep track of the time!),*
- *A spare plastic bag or two (in case you need to poo),*
- *Some note paper (preferably waterproof) and a pencil,*
- *A whistle (for emergency use), and*
- *Chemical heating pads (a small crystal or jelly filled heating pad that when exposed to air produces a small amount of heat for many hours, some types are even reusable. Place them inside against your skin beneath your clothing for maximum effect. An invaluable emergency heat source, carry one or more).*

Most of the small items can fit inside a small waterproof container (e.g. a one litre wide mouthed nalgene bottle) and will weigh about 0.5 kg. The first aid kit, spare light(s), your spare clothing, food and drink should also be waterproofed (at least double bagged). Don't go underground without this equipment!

As mentioned in Chapter 1, there are also a few emergency items (really group gear, rather than personal gear) that should be on hand back at the car. Make sure people know where the car keys are hidden though! These items are:

- *Full First Aid Kit,*
- *Sleeping bag, mat and ground-sheet (It may be needed in the cave in an emergency),*
- *Fuel stove, fuel and drinks (e.g. soup, milo) (for rewarming people),*
- *Plenty of warm, dry clothes,*
- *Emergency callout information, and*
- *Money/phonecard for a phone.*

I have thought about the selection and subsequent failure of this anchor at length and believe that it's failure wasn't foreseeable. I have been vertical caving in Tasmania for 15 years and have spent well in excess of 3000 hoursunderground and this was the first time I've ever had an anchor fail. [I know of only one other similar occurrence, when a block used for a deviation in Big Tree Pot detached and slid down the rope to hit an ascending caver.] Even with good practices, eventually the statistics catch up with you and in my opinion it was just one of those bad luck things. I think it is important to note that having sound back-up anchor practises assisted in preventing this bad-luck becoming a disaster.

At least two pieces of rock struck me in five places; to the left rear of centre on my helmet, on my left hand (controlling the autostop feature of my Petzl Stop descender), on the top of both thighs (particularly the right one) and also on the inside of the lower right leg. It is possible that since I was hanging free from a rope that some of the impact was absorbed by moving me around, though I don't recall spinning or bouncing.

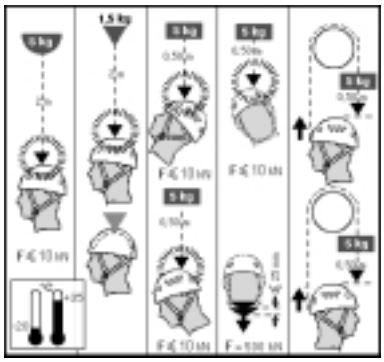
Despite being dazed and in the dark, it was obvious to me that lower anchor must have let go and that the backup anchors had served their purpose as I was still hanging in space. Considering the profile of a person abseiling free, I am somewhat amazed (fortunate!), that none of the rock fragments actually hit and cut through the rope! Also, given that I was using a Petzl Stop, my descender stopped me when my left hand was hit and instinctively recoiled (having just replaced the top pulley of my Stop prior to this trip, it actually did Stop on the 9 mm rope-normally Petzl Go is a more accurate name). My rope controlling hand (the right one), as far as I know did not let go of the rope, despite the incident. I did not lose consciousness. If I'd been using some other form of descender it is likely that I may have done the last part of the pitch in an uncontrolled manner. Conversely, if I'd lost consciousness, I'd have been stuck on the rope. I think Stop descenders are the best option for serious vertical caving. All vertical cavers should be able to rescue someone from mid-rope.

I did not push fate by hanging around, as the rope above could have easily been damaged and about to fail at any instant.

I smoothly descended to the boulder pile floor, but couldn't stand on the sloping floor on my damaged/shaky legs. Damian came to my assistance and helped me move away from directly beneath the pitch lest some more rocks come down.

I felt faint and really felt like lying down for a little sleep! I vividly recall Damian saying "Don't go to sleep". I guess I was slightly concussed and not behaving rationally for a moment-something that you may encounter with someone who has just had a bang on the head and/or a bit of a fright. The concerned/stern tone of Damian's voice was very effective and I soon was with it. I then realised that I had lost my glasses (in none of life's little incidents like bike crashes and skiing stacks have I ever lost my glasses before, so never bother with any sort of retaining strap). Damian helped me assess my damage. It was immediately obvious that my helmet had saved me from any serious head injury as there were only minor scalp bleeds beneath the impact site. I also had a few minor bleeds on the face from where the frame of my glasses punctured the skin. Incidentally, my glasses (one lens missing, the other broken into menacing shards) had hardened glass lenses, not plastic. This is an unwise risk I have been taking for many years; my replacements will have plastic lenses.

My helmet is a UIAA conforming "Ultimate" (Joe Brown style) glass reinforced polyester (i.e. fibreglass) model of 1984 vintage. Yes, it is 14 years old, but was in good condition. Solely because of it's age, on and off I had been thinking of replacing it over the last year. Despite it's age, it did a magnificent job saving my skull! After cleaning the mud off it, the damage to it was alarming. The damage area is roughly elliptical in shape, about 15 cm by 8 cm, on one edge is a 5 cm long crack that goes almost right through, on the other side is a 10 cent piece sized divot that likewise almost goes right through. There are several spongy bits in the damaged area as well. Several internal attachment points (between shell and harness) were broken or missing-all going west in taking the impact and the helmet is now a teaching aid!



A summary of UIAA tests and standards.

A helmet conforming to UIAA standards must pass several tests (see the panel above); including an Impact Test, where a 5 kg weight is dropped from 2 m above and not more than 10 kN force should be transmitted to the head (i.e. to stop damage to the neck); a Penetration Test, where a pointed 1.5 kg weight is dropped from 2 m above and it must not penetrate the shell (i.e. to stop damage to the skull). From how my helmet stood up to this incident, which was a more severe test than either the Impact or Penetration Test, it is obvious that my 14 year old helmet still exceeded the UIAA specifications. I might hasten to add that I don't recommend this method for testing your helmet! In relation to the age of my helmet, it is interesting to note the quote below:

..... glassfiber/polyester resin laminate. This is the most durable system for helmet construction giving a service life 2 to 3 times longer than injection moulded thermoplastic shells (often rated to last 5 years, e.g. Petzl Ecrin). They suffer very little from ultra violet degradation, have no plasticisers to migrate and are very resistant to chemical attack. Under impact they absorb energy by progressive disruption of the laminate which gives the lowest transmitted force figures for any shell material. After severe impact the damage is readily apparent to the untrained eye so unlike many thermoplastic shells, which can hide damage, they will be discarded before unsafe use. (Speleotechnics, 1998). ***[How old is your helmet?, will it still save your skull?]***

The most pain was coming from my visibly swollen right thigh, and there were two large holes through my caving-suit and thermals, one on each thigh. There was also some blood running down the outside of my right gumboot. Having done several Wilderness First Aid courses, I was primarily concerned that perhaps I had broken my right femur, as it hurt rather badly (though I'm sure that it didn't hurt anywhere near

enough to what a broken femur would actually feel like!) and was already showing marked swelling (internal bleeding). If that had happened I doubt that I'd be here today given that: a broken femur can result in the internal loss of a couple of litres of blood; the air temperature was about 8°C; it would be at least an eight to ten hour wait before any significant medical aid could reach me; it was a difficult cave, a stretcher simply wouldn't fit through the Cramps or Hammerlock, nor would a caver with a splinted femur! Some prodding and the ability to half stand indicated that it fortunately wasn't broken. The bleed on my right lower leg was only a minor one, and whilst Damian went to find my glasses, I dug out my emergency kit and applied a Triangular bandage to the bleed (my hands were clean due to wearing gloves, Damian's ungloved hands were mud caked-this is another good reason to wear gloves). I did think about applying an elastic roller bandage to my right thigh for support/protection but decided against it. Damian found my destroyed glasses and noticed two football sized pieces of fresh rock.

To prevent getting cool (whilst we waited for Hugh and Dave to come to the pitch head to check out the damage) I donned my balaclava, and ate my lunch (which I'd not bothered to eat earlier as we were on the move, and we'd had morning tea earlier). I did have a spare jumper, but as I was warmly dressed decided not to put it on. Eating let me know that I had a sore jaw, presumably jaw-lash, as I was hit the impact site was diametrically opposed to my jaw. I was pleasantly surprised that my neck felt fine, the helmet obviously did it's job there. I felt very bodily sore, and guess I was probably a little shocked. If our party was only two in number, then we would have had to make a decision about whether someone should risk prussiking up the rope, or whether we would wait for outside help (which would be about 15 hours away.) I would have tenderly prussiked up the rope as is, reasoning that if it held during the impact and for the last bit of the abseil, it probably wasn't too badly damaged.

If my injuries had been more severe, e.g. bones broken rather than just badly bruised, or a head injury rather than just concussion, then the situation would have been quite serious as a self rescue would not have been possible. In addition, outside help would have been at least 8-10 hours away and any serious injuries would be verging on life-threatening after that sort of wait. Fortunately I was quite confident that I could get myself out, but realised it would probably be a slow and painful exercise. I was keen to get moving as soon as possible before my injuries began to stiffen.

Our first problem was, safely ascending the pitch. We waited for Dave and Hugh to reach the pitch head, and after a few communication problems (Dave and Hugh said 'I didn't sound like the normal Jeff' and they also didn't realise that I'd been injured for a bit.) The knot holding the tape and krab to the missing anchor was wedged in a notch, Damian had to weight the rope for them to be able to free it. They inspected the rope, it was apparently OK, which was fortunate as the only other rope at hand only reached half way down the pitch (of course they could have just end for ended it and/or knotted out any damaged section). None of the knots in the rope were tight, showing that there was virtually no shock load transmitted when the lower anchor let go. I requested them to backup the existing anchors, which they did and they re-rigged the original rope.

It was about 3:45 p.m., that I shot up the rope (prussiking with the left leg only) at an impressive speed, there must have been some adrenalin working there? My injured left hand was still quite useable if I kept it in a constant position, but made me wince every time I moved my longest finger; I suspected a broken knuckle there. A plan was formulated as Damian ascended. I commented to my mates that I was feeling very selfish and self-centred (which is probably normal for an injured person) as I handed my half empty pack and it's contents to the other three. Dave would head out ahead of me, Damian and Hugh behind. Dave took the short rope with him, as I requested that he belay me up the two short unprotected climbs (5 m after Hammerlock, 4 m after The Cramps), as I had restricted use of both legs, the right one did not want to bend very much and kept on cramping when I attempted to lift it high). Also, without my specs, my vision was hazy, but I could see sufficiently well [roughly 6:1 (i.e. see at 1 m what normal people see at 6 m), sometimes when bushwalking in drizzle/rain I find I see better without my specs. However, if your uncorrected vision is much worse than this, then it would be wise to carry spare glasses on any trip.] to get by. Fortunately, for most of this cave one is either on rope, or lying down in squeezes, i.e. you don't really need to see. Going up the ropes was fine (pitches of 10 m, 55 m, 16 m, 43 m), and I actually found that I provided I didn't take too big a bite with each prussik I could put near full weight on my right leg. The long constrictions were quite painful, whenever my thighs touched rock they let me know. It's amazing how letting a little wince out somehow helps ease pain. I stayed on my left side as much as possible. Without the burden of a pack, I found that I could easily keep up to Dave ahead of me.

To be honest, getting out of the cave wasn't too bad at all, despite my injuries. My caving fitness and familiarity with the cave obviously served me in good stead there. At no time did I ever doubt my ability to get myself out, having a positive frame of mind is advantageous in these sorts of situations. I emerged on the surface at 6:30 p.m.

It was quite cold on the surface (say 4-5 °C, whereas it was about 9-10 °C underground). An oversight here was that Dave didn't have my spare jumper or emergency kit in his pack. Dave donated me his neck-warmer and I ate my last chocolate bar (kept in my trog-suit pocket, not under my helmet where some cavers store things!!) which helped significantly. We calculated that the others would be about 45 minutes behind us (to the base of the entrance pitch), but 75 minutes later there was no noise of them. I felt concerned that they may have themselves had a problem, Dave too. It was easy to think of other disasters that may have happened to slow them down, but none of these were realistic scenarios; they were just moving a lot more slowly than we did. They arrived on the surface at about 8 p.m., the 90 minute wait had cooled me down and stiffened my legs up somewhat.

The most difficult part of the trip was yet to come, i.e. the walk back along the downhill taped route through the rainforest in the dark. Dave did a good job out the front in keeping us on the correct path. The steepness caused me a lot of thigh pain, and I did a lot of the steep bits on my namesake as this meant that I didn't have to bend my legs much. The number of logs to cross was also a hassle, but I soon learned the least painful way of handling obstacles. I was most concerned with sudden slips/trips as these caused significant pain and because of my reduced vision I had to travel very slowly. Once we reached McCallum's track it was a lot easier. We arrived back at the car at about 10 p.m.

Damian drew the short straw for driving a car with personality (i.e. my '74 Torana) back to Hobart, we got there

about midnight. Phone calls from Maydena announced our later return. I got dropped off at Casualty at the Royal. Triage wise I was walking wounded, i.e. low priority. After the normal wait (a busy Friday night) I received some attention, X-rays of my swollen right leg and swollen left hand showed nothing broken. My scalp and face only had minor lacerations. My lower leg wound was dressed and at 4:30 a.m. I taxied home, feeling rather cold and hungry. A hot shower helped no end and I flaked. It had been a long day.

I feel that I was very lucky, some would say that I was unlucky, but I like to look on this experience positively). I am a happy to be gracious and accept that I escaped-it just wasn't my time on Friday. Adventure activities do have risks associated with them, caving is no exception. Indeed the risks associated with caving are somewhat heightened by the difficulty of any rescue. Being well prepared, having good equipment and using sound caving practices (e.g. back-up anchors) help reduce the risks, but this doesn't eliminate them entirely. Knowing what to do in an incident, using available resources and being prepared to endure a bit of physical discomfort allowed an easy self-rescue from a difficult cave.

Many thanks to my caving buddies for their assistance. I am ever so grateful that it wasn't any of them that got sconned on rigging installed by me, even if it was just bad luck. Also many thanks to all the phone calls/visits that I received, the news really did get around fast!

I hope that everyone reading this picks up a few pointers that may help them prevent having an accident, or helps them out in knowing what to do if they are unfortunate enough to be on a trip in which an accident happens .

Guano does happen!

Make sure you are prepared to handle it when/if it does.

Jeff Butt

[PS. For those interested. Soft tissue injuries are often problematic, I've got 'Myositis Ossificans', which means that I've got some slowly calcifying damage areas in one muscle in my right thigh, thus explaining my stiff leg and limp. I probably wont be caving for many months till this either resolves itself or the offending calcifying bits are surgically removed.]

Some observations of Caving around the World-Part 1, the USA.

Last year I was fortunate to have a six month round the world caving binge. In this time I visited many different countries, saw many different types of caves, caved with many different people, observed a wide variety of practises and learned lots of interesting ideas. I thought it would be worthwhile to share my observations and some ideas gleaned from my trip. (Or....how else am I going to fill up this last half page gap in this Spiel!).

For the first instalment, here's my observations of things in the USA, mainly from my time spent in New Mexico where I worked as a volunteer at Carlsbad Caverns National Park.

Caving here is highly regulated, secrecy is high, conservation is paramount. Observations include:

- Restoration is a very strong activity. New cavers often have to spend their first few trips cleaning the damage caused by other cavers (e.g. scrubbing flowstone, erasing footprints etc.) before being allowed to go on normal trips. This way they are much more sensitive to the cave environment and damage caused by people.
- Restoration accompanies every trip, if you are exploring off the trail (there are many trails delineated by parallel tracks of red flagging tape) one must erase all footprints/scuff marks as one retreats. This is easily accomplished in dry areas by a sweeping with the back of the hand as one backs out.
- Exploration and surveying caves in national parks is highly regulated, people who do the sketching need to be certified (to ensure a sufficiently good standard) and all work has to be handed over to Parks staff at the completion of a trip. Rangers specify where work is to be done and afterwards add collected survey data to their data base. Copies of the work are provided to the workers.
- Imperial units are used, with the exception of decimal feet! Fore and Back-sights are mandatory.
- Often, when surveying, geological inventories are also done to record the types & locations of minerals.
- Generally it's all electric lighting (Petzl Megas or Zooms, or Lucky style lamps) and with disposable dry cells.
- Bolt laddering is allowed, but is highly regulated. A proposal has to be submitted to Parks staff. Restoration goes hand in hand with exploration. Surveying is mandatory, as is Restoration work afterwards.
- Cave locations are National secrets.
- Prior to visiting the sensitive Lechuguilla Cave, one must attend a half day "Orientation" with Parks staff. This ensures everyone knows the rules and what is expected.
- When one has to travel over flow-stone, aqua-socks (which are basically slippers with a white base and light-weight uppers) are worn. This stops leaving sock hairs or skin oil on the formation. Aqua socks are light and easy to carry.
- Don't touch the water (especially in Lechuguilla), lest you contaminate it with human microbes. Carry out everything, though in some multi-day trips in Lechuguilla it is permissible to dump urine at special urine dumps).
- A small ultrasonic distance measurer can be used to accurately measure passage heights, and widths without having to walk over the surface.
- Gear is incredibly cheap (or it was then as the A$ was 80 US cents).
- IRT is the (scary) norm, what's a rebelay!!
- Texas and Mitchell SRT systems (with Chest Boxes) proliferate.
- When the air temperature is 19°C and its ninety-something percent humidity, one doesn't need to wear much!! (But one does need to drink a lot). When caving in the near nude, one caves quite gently, or else one loses lots of skin!

Watch out for the next instalment in the next Spiel.

The E(N)d.

Servelane-Growling Swallet (JF36) 19/7/98

_ Party: Andreas Galambos, John Hawkins-Salt, John Palmer.

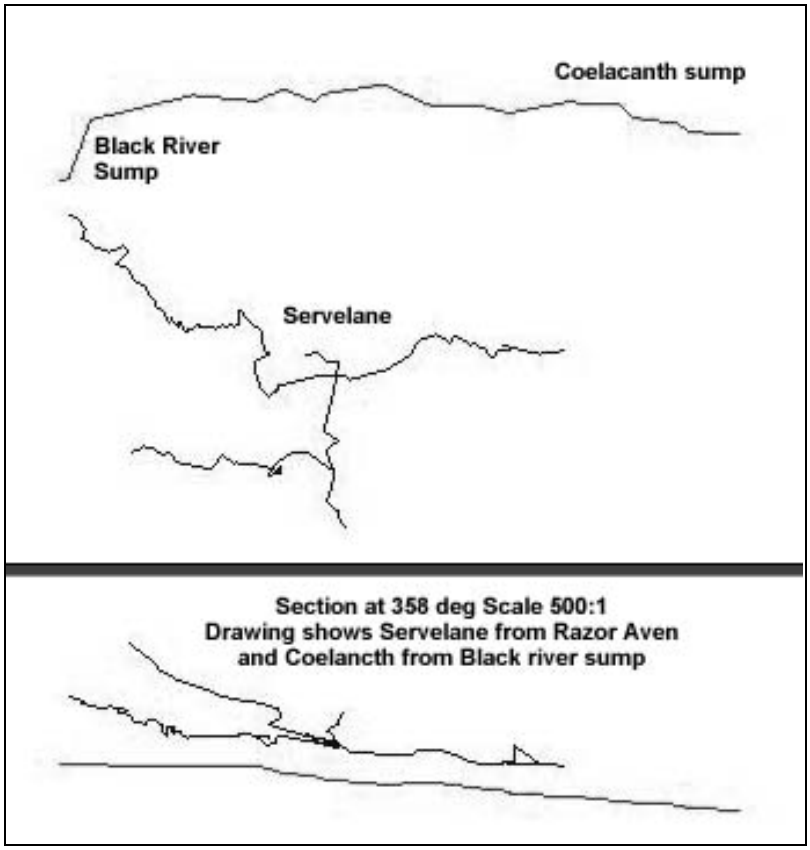
Ever get that I've been had feeling? Ever been in so much abject squalor & muck that the slums of Calcuta seam like a good place to take a holiday ? If you have then you've probably been to Servelane & if so why didn't you finish the B**!*y survey ?!

Such are the thoughts that cross the mind of a weary potholer as he licks the mud of the compass & clino for yet another 1.2 m shot. Servelane is it must be said not a pleasant place. This of corse is why the survey was never completed even though it was explored eons ago.

What worries me is why I didn't cotton on to what was afoot when asked to accompany JHS & Andreas on the "Lets just nip in and finish the survey trip". They even mumbled something about the fact that there might be a few tight bits & a bit of mud. I still didn't put it together and realise what I was letting myself in for a long spell in purgatory. All the signs were there, Trevor said he'd love to come but just couldn't make it! I even knew from recent experience that caving with JHS tended to be eventful. I must be getting senile.

Anyway I digress a serious publication like this is not place to air my innermost fears and loathing's. This is of course the place to record that Servelane is now pretty much surveyed. There are however a couple of leads left.

In the 4 way chamber a stream comes in from the right hand passage which can be followed for about 80 m the last bit trends steeply up into to tight rift. But 30 m along this stream is a sort of junction with the right way being



through a few boulders and up into some quite good passage this was followed for about 120 m to be stoped at a small aven with obvious continuation above. This aven could be easily climbed with a rope and some protection.

That's all I can think of to write about Servelane in language that you could repeat to your mother. In summary we were thoroughly pleased to get out the only highlight was the thought that we had a new bit of passage. If anyone knows this to be untrue please, please don't tell me at least until I have recovered my mental stability.

PS. 473.2 m of passage surveyed and yes that 0.2 is bloody important, we suffered for that all you swine's who forgot the compass & tape. Oh no here come the men in the white coats.

John Palmer

Idea of the month

OH F!$%, I JUST DROPPED THE ROPE DOWN THE PITCH AND HAVE STRANDED EVERYONE!!

If this happens to you, then here's a solution. Do you remember the Mintie wrapper game . . . . . where you tear a Mintie wrapper into as long a strip as possible? Except in this situation you substitute your trog-suit for the Mintie wrapper and a Knife (Scissors work best) for your fingers.

The rest (apart from putting your trog-suit back on!!) is pretty obvious, and I bet that you never drop a rope again!! Any of you who try this out might be interested in the second part of the adjacent advertisement.

Dave Rasch

Wanted

2 buy and ...

A **trog-suit and a furry suit**, please contact Andy Roberts, 62679877 (h).
and/or....

a couple of trog-suit makers give a discount if a number of suits are ordered together. If you are interested in pooling an order with me, then please call.

many thanks, Andy.

Draining: A trip through history in the Hobart Rivulet-22/7/98

Party: Liz Canning, Robyn Claire, Arthur Clarke, Jol Desmarchelier and Phillip Tracey.

On a brisk Wednesday evening in late July, there were three cars parked on the roadside up near the Hobart Transit Centre at the top end of Collins Street. The occupants of two of the cars sort of knew each other, but who was it that was wearing the balaclava and woolly jumper in the other car? Was he one of us? Has someone else been reading our STC List Server bulletin board …… it was a mystery, soon to be revealed as Robyn and I got out of our car and starting trogging up in caving gear in the carpark outside the front of Motor ……. then a "shadowy" figure began to stroll across the street towards us: Jol Desmarchelier had returned from Canberra!

It turned out that you didn't really need to have trog-suits on for this trip, because the water level was pretty low - what's happened to our winter rains this year? So, shortly after 8 p.m., with lights on heads we hopped through the hole in fence near the Transit Centre and down a short fixed ladder into an "open" (non-roofed) section of the Hobart Rivulet. We were walking along a wide cobble floored streamway, just like a creek bed, then had to wade through a short section of calf deep water upstream from a short dam wall, possibly designed as a barrier to stop logs or rubbish from entering the main downstream rivulet watercourse, which was confined to a narrow sunken-floored concrete channel, where we subsequently walked along the concrete "banks" beside the central channel. It didn't really seem like night-time in this open section: the city lights created an interesting twilight effect; so we didn't need to use our caving lights, apart from the fact that we didn't want to make our presence too obvious.

An immediate feature of note was the minor abundance of spray-painted graffiti and signatures on the 5-6 m high rivulet walls. Our first bit of brief "darkness" was the road bridge under Barrack Street, then we were into another open section behind the service station and Cinema complex carpark, along which much of the rivulet wall is composed of old, ivy covered sandstone blocks, with a few small side entry pipes. The next major "underground" section starts beneath the laneway which runs off Liverpool Street between the "Star" newspaper and Home Improvements buildings, about 60-80 m up from Harrington Street. There are two other particular features here: firstly, yet another fixed ladder entry/exit point to the rivulet near the northern back corner of the Cinema carpark and secondly, opposite this ladder, there are two old "dunny" outhouses (one dilapidated construction made from unpainted wooden boards, the other clad in painted sheet iron, laminex or similar) - both of these are suspended out over the rivulet from behind the old brick wall of the Home Improvements building! This next underground section is only about 50-60 m long, following which, there is another short open section leading down to the public toilets and the Harrington Street bridge overpass, originally built as a sandstone block construction in 1844.

Downstream from here, we finally entered the first main enclosed section of the rivulet, a tall wide roomed tunnel, built largely out of sandstone, but with subsequent later additions of red-brick, cement brick, concrete or steel. It felt like we were on a trip through the early history of the development of Hobart as a city. (During the early settlement days of 1804 onwards, tall ships used to sail up into the lower reaches of the Hobart Town Creek or Rivulet, in the vicinity of where the City Hall now stands today - where Lieutenant-Governor Collins and his sailors took on board supplies of fresh water. The progressive erection of retaining walls along the Hobart Town Rivulet was commenced during the 1820's and 1830's, along with various bridge overpasses, as properties were developed and buildings constructed along the route of the original rivulet; the present structure still follows the original watercourse, except for some diversions down the lower end in the former Wapping and Old Wharf districts.)

The graffiti in this first main underground section, east of Harrington Street, was more noticeable and much of the original old sandstone block-work was now barely recognisable due to the spray-painted art work, signatures and messages that adorned the tunnel sides. Amongst some of the most repetitive graffiti were the numerous comments made by members of the 1985 "expedition" of the Abbotsford (Melbourne-based) "Cave Clan" - some "street kids" who used to apparently regularly tour (and decorate) the underground drains of major cities in Australia. Along the route of this "dark zone" of the rivulet tunnel, it became a more interesting endeavour trying to work out where you were in relation to known Hobart city buildings, shops, streets and other features on the surface above us! There are numerous small side pipes coming into the main rivulet; mostly too narrow to see into, let alone crawl into. We passed under another small grated opening in the roof beneath another toilet block, that might have been possibly behind the Centrepoint carpark. Our next major site of interest was under the Hobart Mall end of the Cat and Fiddle Arcade - most of this arcade appears to lie directly above the Hobart Rivulet along a section with a low roof of corrugated iron. During the recent excavation works in the Hobart Mall, when it was re-clad with new paving slabs, the remains of an old sandstone arched-roof bridge section of the rivulet was "re-discovered" and there is now a viewing site outside the Mall entrance to the National Bank where the public can look down onto the historic structure; there is even a reflective mirror with lighting on the underground rivulet's sandstone walls. Although originally built as a horse and cart track bridge, this is quite a wide bridge - as wide as the present day Elizabeth Street, and according to the Hobart City Council's Heritage Officer, its first recorded use dates back to 1841.

Jol, under the sandstone bridge

Just upstream from the public inspection opening on the downstream side of the old sandstone bridge (which is thankfully devoid of graffiti), there are four sizeable side drain tunnels coming in on the left hand (northern side). The first westernmost (upstream) side-tunnel is an old square shaped brick "affair", with a dolerite slab base - its probably about 0.75 m in diameter, but a bit small and "pokey" to get into and not very inviting; it looks really grotty and is largely choked with refuse. Immediately opposite this, is another similarly built brick-encased drain tunnel coming in from the southern side: this narrows down to a 40 cm wide plastic pipe. Back on the other (northern) side, there are a pair of large

concrete pipe tunnels, quite close together, then another third concrete pipe a little further down near the sandstone arch: all three are a little bit less than two metres in diameter. Liz, Phillip and I decided it was time to do some exploring, while Jol and Robyn became distracted by the abundance of short stumpy straw stalactites (budding young speleothems) that were growing out of sandstone mortar joints! We three pipe tunnel explorers discovered that the first pair of pipes join together as one pipe, about 80-100 m northwest from the main Rivulet; so we went in via the westernmost pipe and came out the other central pipe. Where two pipes join, the continuation goes west-northwest and is slightly smaller in diameter so you have to stoop a bit; in the bottom of this gradually inclined pipe, the small streamway is floored with a slimy algae, which you need to straddle to avoid slipping. We followed this for about 200-250 m, but it appeared to be just a continuum of more of the same monotony of round pipe. On the return back to the main drain, I found it easier to sit on my haunches in the stream and using my hands as a guide (and brake) on the side of pipe walls, I could slide down the gently sloping pipe on the soles of my gumboots (remembering the old adage that "water is to rubber, as oil is to steel"), just like being on a water slide. [In his posting to our List Server, J.B. said that these two pipes and their long single extension, eventually lead to a larger chamber, into which the third easternmost side drain ("the Fudge-tunnel") connects.]

Under Which Bank!

The third (easternmost) concrete pipe is more interesting: this leads back into an old brick built tunnel with an arched ceiling that you can comfortably walk upright in; it trends almost due northwest, along the eastern side of Elizabeth Street, (and for those that maybe interested) along the front side of the Commonwealth Bank! Phillip and I wandered up this tunnel, later followed by Robyn. As you go along this arch roofed brick tunnel from the main rivulet, which is relatively level, you pass a few manmade "avens". The first one of these is capped with a round cover plate - in times before the present era of "political-correctness", we used to call these "manhole covers"; above this cover plate you could hear (and feel the vibrations of) traffic: this was probably in Liverpool Street. The second "aven" leads up to a steel grate, with diagonal cross bars: it would normally take runoff water from Elizabeth Street; as we peered out into the street lights, we could see car headlights approaching us. (There's a grate similar to this outside Banjo's Bakery and another one opposite.) Somewhere along the route, there is yet another side entrance coming in from the east; an older style square-framed brick drain about 60 cm in diameter: but also containing lots of rubbish. Further upstream you step over a small retaining wall which acts as a sediment trap: we were glad to be wearing gumboots, because beyond this wall we walked through 15-20 cm deep grunge, gently flowing water with a soft oozy sediment base and lots of everything imaginable in a drain!

As the tunnel started gently rising, the water level shallowed, back down to ankle depth. I found a moist side wall and collected some invertebrate specimens: spiders, beetles, isopods (slaters) including *Styloniscus sp.*, millipedes, springtails and native land snails, including one of the carnivorous species: *Tasmaphena sinclairi*. Approximately 350-400 m northwest of the main rivulet, the brick tunnel suddenly converted to a smaller diameter 1.5 m wide pipe; after another 100-150 m, this pipe tunnel started trending west and actually appeared to go downhill for a short distance: we soon became sick of stooping and headed back to the main rivulet.

Downstream from the arched sandstone feature under the Mall, the rivulet tunnel becomes quite large again and starts veering to the right heading in a more easterly direction and we eventually emerged into the city twilight again, in a wide open channel alongside Collins Street, behind the Queen Alexandra Hospital. Here the side walls are quite low and there are several entry/exit points, where the Hobart City Council's weekly (Thursday afternoon: 4-5 p.m.) tours of the Hobart Rivulet start and finish.

And now for a bit more history: the lower estuary end of the original course of the Hobart Town Rivulet used to come out into the Sullivans Cove Bay with the creek running from near this corner beside the Queen Alexandra Hospital, then trending east, slightly diagonal to Market Place, and emptying into the bay near where the present eastern corner of the City Hall is located. In order to reclaim more shoreland and ease the flooding situation, the rivulet was diverted further north beyond Campbell Street in 1825 and connected with the Park Street Creek (or Domain Rivulet) near the former Hobart Slaughter House (where Roberts Ltd. is today), then re-channeled out along the "New Cut" near the present day Hunter Street and behind the Old Wharf warehouses of the Wapping district. Early reports of life in the Wapping district of Hobart Town during the mid-1800's, suggest that this rivulet diversion had increased the problem of flooding (and pollution as it became an open sewer), so the channel was widened in the 1880's. In order to further solve the problem of siltation, pollution and flooding in the Wapping District, the Hobart Marine Board (c. 1911-1913) suggested that the Hobart Town Creek should be diverted again with a new rivulet tunnel and outfall to be constructed under the Hobart Domain and railway yards, emerging at Macquarie Point. Known as Hobart Rivulet Diversion, works were divided into three stages: the Domain Tunnel was completed in late 1916; the outfall tunnel under the railway yards to Macquarie Point was completed by April 1918 and the final Stage Three: the twin concrete culverts (now under the present lower end of Collins Street, extending back to the western side of Campbell Street) were completed by late l922.

The absent trip organiser on a previous trip to the Fudge Tunnel.

Back to our present day adventures: heading east in the open section beside the lower end of Collins Street, we went underground again beneath Campbell Street where you have a choice of two parallel low roofed concrete tunnels. Both these two flat-lying, low-roofed

tunnels are sand and cobble floored and contain lots of debris including logs and dead fish: the tunnels seem to be trending northeast, running under the lower end of Collins Street, perhaps veering slightly south under the old MTT bus depot and Roberts Ltd. About 150-200 m in, these two culvert tunnels come into a huge cobble floored chamber where there is a relatively massive 2.5 m wide concrete pipe side drain that heads nor-northwest, probably following the Brooker Highway. (This probably follows the drain line of the original Park Street Creek or Domain Rivulet.) A few of us headed up this side drain pipe for a short distance, but it wasn't very appealing, it simply barrels on: monotonously straight in the same direction.

Back in the main Hobart Rivulet tunnel and continuing along, we seemed to be heading slightly east in what was probably the largest part of the whole drain system: a huge dome roofed tunnel completely made out of brick; on the right hand side wall (facing downstream), there was a concrete plaque with the number "1900" engraved into it. There was evidence that we were now in a tidal section of the rivulet: more dead fish, lots of flotsam and jetsam and a brackish marine odour. Several small side tunnels and drain pipes came into the main drag, including one which was which was completely choked with calcite. Below this choked pipe, there were layers of what looked like travertine on the floor of the rivulet; on closer inspection this appeared to be layers of cement: I guessed that we must be somewhere near the outlet drain for the Boral cement batching works near the Royal Engineers building on the Cenotaph side of the Brooker Highway. In some places, there were occasional stalactites coming out of the roof and few crusty helictites emerging from around mortar joints between the bricks. From here the water level was gradually getting deeper, but those of us in gumboots kept going because we could see a glimmer of light at the end of the tunnel: (Macquarie Point), a glow that was possibly coming from settlement on the eastern shore of the Derwent River, or emanating off waterborne reflections from either the Cenotaph lighting or lights around the Macquarie No. 6 Wharf. We were now walking through the most "cave-like" section of the rivulet: a tunneled section through dolerite rock - the walls and roof were all rock, apart from a short side wall of cement. There was no noticeable evidence of the rock tunnel roof being shored or stabilised in any manner, but despite this, there were very few pieces of freshly fallen rock. Further on from the dolerite rock section, we came into a concrete and brick walled section again and the water level was getting deeper. It was now around 9.50 p.m. and although high tide was at 6.45 p.m. that evening and now receding, it was now time to call it quits as the water lapped up near the top of my knee-high gumboots; we were near another one of those concrete plaques on the RHS wall: this one had the number "2600" engraved into it.

Time to leave: those of us (Phillip and Jol) that weren't clad in caving gear, didn't feel like trundling up Collins Street through the city, because they reckoned we (Robyn, Liz and myself in our caving gear) would embarrass them! So back up the rivulet we went and we actually noticed a few other points of interest on our return journey. On the way back we commented on the steeply banked camber of the left hand concrete bank (facing upstream), where the rivulet changes direction as it heads southeast to east (facing downstream) near its emergence into the open channel behind the hospital. There was a steel cabled hand-line at the top of the steep bank through this curving stream channel section (probably placed there recently for the Hobart City Council's guided tour walks along the rivulet). Our exit time back to the Transit Centre (via the Rivulet) was quite quick - a mere 40 minutes, still with time to peruse all the graffiti and regular surface landmarks from another angle. A very pleasurable trip was had by all, with many thanks to Jeff for suggesting the trip in the first place.

P.S. If you are interested in going on one of the Council's regular Thursday afternoon guided tours of the Hobart Rivulet, you need to make a booking. It costs $14.00 for adults and $7.00 for students/ pensioner discount; (they don't mention taking children!)

Reference:

The Wapping History Group, (1988) "*Down Wapping- Hobart's vanished Wapping and Old Wharf districts*" Blubberhead Press, Hobart. 251pp.

Arthur Clarke

The GPS 1024 Week Roll-over (& Y2K).

Some GPS equipment will fail because of a date roll-over at midnight, 21 August, 1999.

GPS System Time will roll-over at midnight on August 1999, this event is known as the GPS Epoch roll-over. (Some 132 days later the Millenium will roll-over.) On 22 August 1999, *[*GPS System Time starts at 00:00:00 UTC 6 January 1980, (Julian Day 2,444,244.5). A GPS Cycle is 1,024 weeks, or 7,168 days, so the first GPS rollover will occur at Julian Day (2,444,244.5+7168) = 2,451,412.5, which is 00:00:00 UTC 22 August 1999 AD, i.e. midnight between Saturday night the 21st of August, and Sunday morning the 22nd of August, 1999.]* unless repaired, many GPS receivers will claim that it is 6 January 1980, 23 August will become 7 January, etc.

Accuracy of navigation may also be severely affected, although it appears that GPS broadcasts do contain sufficient data to ensure that navigation need not be affected by the roll-over in 1999. However, it is not proven that the firmware in all receivers will handle the roll-overs; some units will give wrong locations and incorrect dates.

Some manufacturers have already solved the problem, but some have not**.** [Apparently Garmin have solved these problems, and so **STC's new GPS unit will not be bothered** by either the GPS Epoch or the Millenium Roll-overs. Ed.] Some (mostly older) devices will need a hardware upgrade. Without a GPS Simulator, there is no way for users to test a GPS receiver for this problem. If in doubt, contact the manufacturer of your unit to see if it will be affected.

from the Internet, Ed.

STC WaReHoUsE SaLeS

New Stuff

- Eveready 6 Volt, 0.5 Amp Flange Mount Bulbs (#1417), Blister packs of 2 — $2.50 each
- CAVE PACKS, 35 litre volume, made from Heavy duty PVC material, double bottom, reinforced seams, drain holes, large diameter eyelet's. Simple and sturdy. — $60.00 each
- Aluminium Bars for Rappel Racks. — $5.00 each

Tape

- Edelrid 25 mm tubular tape. Ideal for rigging, chest harnesses etc. (White) — $2.00 per m
- 5 cm flat tape (ideal for harnesses, rigging, gear bags, belts etc.) (Blue or Red) — $1.50 per m
- 2.5 cm flat tape (ideal for handlines, rigging, gear bags, etc.) (White) — $0.80 per m

Safety

- 9 mm Beal dynamic rope (ideal for cows tails, safety loop) (Purple-GOING FAST!!!) — $3.50 per m
- Space Blankets (don't be caught underground without one! — $4.00 each

Lighting

Duracell 4.5 Volt flatpack batteries. ALL SOLD!! IF YOU WANT ME TO GET MORE, THEN ASK.

- Metal light brackets (used and no fittings) for helmet — $1.00 each
- Jets (21 litres/hr) for Petzl kaboom — $5.00 each
- Miscellaneous second hand pieces for Oldham headpieces. — Contact us for details

Tow Ropes/trailer tie downs/yacht mooring lines etc.

- RETIRED CAVING ROPE, no longer safe enough to use for caving purposes (ADORNED WITH PAINT SO THAT YOU WONT BE TEMPTED!!), but more than adequate for many other purposes. Available in lengths up to 10 m. — $1.00 per m, less for the stiffer stuff

If you need any of the above please contact Jeff Butt on (03) 62 238620 (H), or jeffbutt@netspace.net.au, or write to us: SOUTHERN TASMANIAN CAVERNEERS, P.O. BOX 416, SANDY BAY 7005. If you have any other suggestions of gear that the club should Bulk Buy, then let us know and we will see what can be done.

ANNUAL GENERAL MEETING-NOMINATION & PROXY FORM

Appointment of Proxy for the STC Annual General Meeting.

I, _____ appoint _____
as my proxy to vote on by behalf at the STC Annual General Meeting to be held on 4th November, 1998.

My Proxy is authorised to vote in favour/against (delete as appropriate) the resolution (insert details).

_____

_____

_____

_____

in addition, I would like to make the following nominations.

I wish to nominate _____ for the position of _____

I wish to nominate _____ for the position of _____

I wish to nominate _____ for the position of _____

I wish to nominate _____ for the position of _____

I wish to nominate _____ for the position of _____

signed _____, dated __/__/98

Return this form to the Secretary, STC, PO Box 416, Sandy Bay 7006, by 5:00 p.m. on 3/11/98, or deliver it in person prior to the AGM.