Cover Photo:
Jol Desmarchelier measuring 'flood' heights in Bill Neilson Cave (NR1).

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/
ABN: 73-381-060-862

Issue No. 322, Oct.-Dec. 2000

CONTENTS

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

What comes around goes around.....Jamie Allison has done an excellent job editing this publication for the whole year....then he goes and gets a new job and splits. It is unfortunate for us (but probably very good for Jamie's career) that he has gone and it is sad to see him vacate the Editors (hot)seat. Jamie, on behalf of the club, thanks for doing an excellent job with the Spiel. You've set a very high standard that will be a 'benchmark' for all future Editors!

It is unfortunate, that despite Jamie's plea for a volunteer to take over the job, none have come forward. In the absence of volunteers I've somewhat reluctantly taken on the job to get this last Speleo-Spiel for the year out. I do say 'reluctantly' as it seems that far too many jobs in this club seem to fall back to 'familiar' names. Sure, it is comparatively easy for the familiar names to do the job....but when/if they tire of being taken for granted, then what happens to the club?....we need new blood to keep us vibrant and alive!

It would be nice to see a few 'new names' volunteer for positions at the forthcoming AGM (on Wednesday, December 6th)....so please, if you have any inklings of taking on an active role in STC, then please come forward. You don't have to worry about "not knowing what to do", or "not feeling that you can match the 'set' standard", as training/advice/help/hints from the 'oldies' will help you do the job, and if you are doing a job, then you can create your own standards, set your own style and push your own barrow.

Anyway, that's enough of a plea; the festive season is upon us, as is the turn of the millennium (it was only Y2K last year!), so Compliments of the Season to everyone out there.....but, a word of advice: Don't get under the weather, get under the ground!

Jeff Butt

STC has Caving lamps and helmets available for hire to Schools, Scouts and other groups with responsible Caving leaders. Contact the Equipment Officer for details.

Bits and Pieces

Yellow Pages Listing, finally we are in the 2001 yellow pages, under the most appropriate category "CLUBS-CAVING".

CAVEX 2001 is coming in late summer. Mark the weekend of March 31-April 1st in your Diary NOW.

This time it will be a more VERTICAL exercise, there will be lots more hauling and it will be a more technical event. Keep your skills up! As per this year, we will have a practise hauling session at Fruehauf prior to the event.....details in the next Spiel.

Club Matters

THE ANNUAL GENERAL MEETING IS ON AT this very moment....details of what goes on will be in the Next Spiel, due out at the end of Jan. 2001. Happy Millennium to all!!.

ANNUAL SUBSCRIPTIONS are NOW DUE...

STC is financially somewhat pressed (Science Account excepted) just now....so please PAY UP as soon as you can!!! Thankyou.

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FORWARD PROGRAM:

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

Wed Dec 20th	General Meeting at 7:30 p.m. .....have a Xmas Pint!
Wed Jan 3rd	General Meeting at 7:30 p.m. .....if we get a Quorum!
Wed Jan 17th	Social gathering from 8 p.m.

Events: **NOTE.....CHANGE OF DATE!!!!**

Sat Dec 16th **ANNUAL DINNER at Francistown. Full details in Spiel #321. PLEASE COME IF YOU CAN. It will also be a chance to practise the Christmas cheer.**

Wed Dec 13th	Fruehauf Quarry-SRT skills practise/workshop. Mid-Rope Rescues, can you pluck someone from a rope?
Dec 28-Jan 2nd	**ASF CONFERENCE at BATHURST.....it's not too late to come! See www.rutco.com.au/asf2001**
Wed Jan 17th	Fruehauf Quarry-SRT skills practise/workshop. The mysterious Cord Technique unravelled.

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

Sat Dec 16th	Revelation Cave...suitable for the less experienced.
Sun Dec 17th	Exit Cave.....those who come to the dinner get first option to come.

Keep an eye on the STC list-server for trips!, they do happen, but often at short notice!

mid/late-Feb	Mt. Anne, NE ridge, 4-5 days. A day 'carry trip' beforehand!!

WANTED: YOUR ideas for TRIPS .....how about putting them down!

NEW HELMETS SOON, as mentioned in the last Spiel, we were successful with obtaining a $500 grant from the Government for the purposes of buying some new helmets.

Thanks to the Office of Sport and Recreation for looking favourably upon our grant. But also, many thanks to all of you who put some coins in the pokies.....as that is how the Community Support Levy is funded. It's nice to see the wider community supporting Caving!

The plan is to purchase Joe Brown fibreglass helmets. These should have a life of 10-15 years (i.e. 2-3 times that of the Plastic style helmets.)

LOG SNAPPED, that ideally situated massive rigging log (as featured on the cover of Spiel #314) over the first pitch of Dwarrowdelf has now snapped and is threatening to fall down the entrance pitch!

Southern Tasmanian Caverneers Inc.
Income & Expenditure from 1/10/1999 to 30/9/2000

1999	Income	2000
$ 1197.50	Membership fees	$ 1235.00
125.00	ASF m/ship & insurance	115.00
615.00	Light Hire	391.00
94.00	Gear Hire	218.00
165.00	Journal Sales/Spiel subscribers	187.50
350.50	Equipment Sales	434.00
150.00	STC Annual dinner	80.00
333.20	Interest	231.77
500.00	Loan from Science Account	
1.00	Other	12.25
	Transfer from Science Account	394.60
	Science Account	
1.37	Bank Interest	3.01
	Contribution from STC Income (1)	340.12
470.00	Publication Sales	20.00
130.00	Deposit Transfers	
$ 4132.57	**Total Income**	**$ 3662.25**
	Expenses	
121.45	Stationery	119.85
421.05	Equipment purchase/maintenance	359.93
507.20	Printing/photocopying	694.05
411.75	Postage/phone	361.00
1290.07	Subs/affiliations/insurance	897.50
15.65	Govt.duties/bank fees	22.37
75.00	Book-keeping/incorp. fees	75.00
182.61	Socials	188.20
138.24	Insurance (gear store)	152.06
82.00	P.O. Box rent	88.15
130.00	Transfer to Science Ac.	340.12
	Quartermaster honorarium (1)	212.70
	Lodging E.L. objection	20.00
	Books for library	50.00
	Science Account	
335.65	Copying, printing, publication	
19.40	Postage	
	Scientific Equipment	173.93
	Scientific projects	49.30
500.00	Loan to General Account	
	Transfer to General Account	394.60
1.94	Govt.duties/bank fees	2.31
$ 4232.01	**Total Expenses**	**$ 4201.07**
$ (99.44)	**Net Operating Deficit**	**(538.82)**
$ (99.44)	Net income/expenses	$ (538.82)
7046.01	Plus last years funds carried fwd.	6958.72
	Plus cheques written off	
$ 6946.57		**$ 6419.90**
	Represented by:	
$ 1449.01	CBA General Account	116.55
12.15	Petty Cash Balance	10.30
1550.06	CBA Science Account	1293.05
5000.00	Term Deposit	5000.00
1052.50	less U/p cheques	0.00
$ 6958.72	**Total Funds**	**$ 6419.90**

Notes
(1) for previous financial year

Verified by:

Jeff Butt (Acting Treasurer)

Trevor Wailes (President)

Audited by:

Diane Hext (Auditor)

The Mt. Cripps Limestone quarrying EL goes to the Mining Tribunal

Arthur Clarke

Getting up to speed again... where our EL objection going

Following my return from China – where the continued quarrying or exploitation of limestone karst is not considered an issue – I have now been to court representing ASF (and STC) in the Mining Tribunal case regarding our opposition to the limestone quarrying EL proposal at Mt. Cripps. A little more about that later...

I was disappointed to hear that no one from STC attended the combined SRCC-STC surface exploration trip to the modified EL area adjacent to *Lake Mackintosh* and the *Southwell River*, despite STC asking me to make preliminary arrangements for this trip. The report back from SRCC advises that eight of their members turned up on Saturday October 28th but with limited overall person-power, they decided to only spend one day in the area. In the six hours available they did not find any substantial evidence of karst on the western side of *Southwell Inlet*, although some steep cliffs of broken limestone were located near the lakeside. However, they did locate a cave and two karst features including an efflux spring within the EL area on the eastern side of *Southwell Inlet*.

Although I am happy on the one hand to be representing STC (via ASF) in objecting to this Mt. Cripps EL proposal, some more support from STC members would have helped – if only in assisting SRCC to examine the proposed EL area and check out its karst potential to provide more support to further a sound case against the EL. It is probably coincidental, but SRCC have now agreed to support the EL (with a certain provision), following recent discussions with Western Metals. Read on...

While I was checking out the disappearing karst in China (at roadside quarry sites), ASF and STC received recent correspondence from MRT advising us (the objectors) that "*...before any on-ground activity may take place on the license area, the explorer must seek written approval from Mineral Resources Tasmania (MRT). Because the license overlies sensitive areas, MRT will refer any work program proposals to the Mineral Exploration Working Group (MEWG). Members of the MEWG will in turn refer the program to specialist officers within their agencies for advice and comment as required. The MEWG may request further studies be carried out prior to work commencing to ensure that a proper assessment is made of likely impacts from proposed activities. MRT has agreed that any work program put forward for EL 17/1999 must address any potential effects on karst values within the area of the proposed activity. MRT and MEWG will be mindful of the need to protect karst values when assessing any proposed work program in this area.*" The MEWG comprises representatives of MRT, DPIWE (Parks & Wildlife Service and Environment & Planning sections) and Forestry Tasmania. However, the agenda for the operation of MEWG is determined by MRT, following their acceptance of an approved exploration work programme from the mining company and may be subject to the pressures of a pro-development outcome.

As many of you will know, even though the Environmental Defenders Office (EDO) does not currently have a solicitor in Hobart, a member of the EDO Board has advised me that ASF would have difficulty proving its "interest" (in the sense of "proprietorial interest") in order to gain legal standing at the Mining Tribunal. Following discussions with ASF Executive members, other eminent Australian (and Tasmanian) karst figures (who will all remain nameless) and the Tasmanian Conservation Trust, plus buoyed with some sound legal argument, I decided to do the solo act and represent ASF and STC at the Mining tribunal hearing last Monday, December 4th in the Hobart Magistrates Court.

Outcomes from the Mining Tribunal hearing on December 4th 2000

Considering the importance of this issue, there could have been a greater presence of STC members at the recent Mining Tribunal. There were only two of us there. All attendees at the court hearing were given an opportunity to contribute and individual STC members could have voiced their support for the STC objection to the EL. (However, if it's any consolation, there were no representatives present for the mining company: Western Metals.) ASF, SRCC and MRT were represented of course.

The Mining Tribunal magistrate explained that the purpose of the hearing - the Listing for Mention - was to allocate subsequent court hearing time, learn the nature of the dispute and/or recommend booking time for further discussions/ mediation between the parties. If the EL case and objections are likely to go ahead, the magistrate foreshadowed another date in January when the case would be Listed for Mention again and at such time a more defined schedule of court sessions would be determined. The Mines Dept. Registrar stated that he believed another court hearing might not be required because the case could be near to resolution following the recent correspondence from SRCC and Western Metals, though SRCC had not formally withdrawn their objection. However he stated that ASF and STC still had some outstanding unresolved issues.

The magistrate set aside another preliminary hearing date for March 22nd, at 10 a.m. in Court #4 (Hobart Magistrate Court) - if the EL case was still going ahead. The MRT Registrar then reminded the magistrate that the objectors might have to prove their standing before the court prior to any case going ahead. The magistrate said he would allow the first two hours of court procedure (on March 22nd) to be set aside to determine "Standing" of appellants/ objectors. The magistrate also mentioned that since this case was now before/ within a civil jurisdiction, we the objectors (and MRT / Western Metals etc.) could apply to the court for "direction" and also seek to have documents provided.

A summary of the outcomes from the Mining Tribunal in Hobart:

(a) SRCC (and MRT) announced that SRCC have had more private talks with the local Burnie-based Tasmanian manager of Western Metals (on October 10th) and have come to an agreement with the company in regard to SRCC concern for the karst area east of the *Southwell River* (known to include some efflux springs). As a result of these discussions, SRCC now feel that their concerns are no longer warranted regarding the possible impacts to known karst features east of the *Southwell River* within the modified EL area. Furthermore, SRCC had now reached agreement with Western Metals for the EL to go

ahead, with the proviso that an independent karst assessor is engaged and that SRCC had input into the choice of the assessor.

(b) ASF (and STC) announced that their preferred position was still the same: i.e., that PRIOR to the EL possibly going ahead in the future, an independent karst assessment was required FIRST, with input from a steering committee of representatives from ASF (and other caving bodies), plus Tasmanian government departments such as Parks, Forestry, and Mines.

(c) By way of further explanation, ASF raised the point that prior to the original 29 sq. km. EL area being advertised, Western Metals had engaged a consultant (Ken Grimes) to examine the likely environmental impacts to karst from limestone quarrying at specific preferred sites. However, there had been no on-ground assessment of the karst (if any) or environmental impacts in the modified area now being applied for.

(d) MRT stated that the EL application had already been down-sized and modified to a 12 sq. km. area as a result of the previous environmental assessment by the WM consultant. MRT went on to add that both the further suggested independent karst assessments, particularly the latter ASF proposal, were unnecessary procedures because MRT already had its own body: MEWG (the Mineral Exploration Working Group) that was deployed to operate during the course of any EL. The MEWG was designed to critically examine "sensitive" areas (such as karst) after a mining/ exploration company has established an approved exploration work programme with MRT. MEWG would consult with the karst expertise available within Tasmanian government, primarily and preferably with Parks (Ian Houshold) and possibly also within the Tasmanian Forest Practices Unit (Kevin Kiernan) - a body that is now independent from Forestry Tasmania.

(e) SRCC stated that the company (Western Metals) had closed down its Tasmanian operation at the Hellyer Mine (adjacent to this EL application area) and was now in "Caretaker" mode with future operations likely to be run from their Perth-based (W.A.) exploration office. There were two subsidiary implications arising from this:
(i) The present Tasmanian management of Western Metals with whom SRCC and the other bodies involved (MRT, ASF and STC) had been dealing with, would soon be leaving Tasmania and if we were not "quick-off-the-mark", we would lose the opportunity for continued dialogue and rapport with these known people in terms of finalising a satisfactory and agreed outcome for the continued EL.
(ii) Although the company had tested the reprocessing of mine tailings by atmospheric and pressure oxidation (acid) leaching processes in a laboratory, the ensuing process of neutralising the acid generation from tailings (with high grade limestone) and subsequent solvent extraction, electro-winning of zinc and cyanidation to recover gold and silver had not yet been viably proven on a commercial production basis.

(f) MRT stated that despite these shortcomings, Western Metals would not be walking away from what was essentially a substantial ore body lying within its 10.8 million tonne mine tailings dump with a high concentration of valuable heavy metals.
[In their "Annual Report" for 1999, Western Metals calculate that an annual throughput of 1 million tonnes of reprocessed mine tailings from the Hellyer Mine would produce 24,000 tonnes of zinc cathode, 2.2 million ounces of silver, 39,000 ounces of gold and 500 tonnes of copper over a ten year project.]

In private courtroom discussion following the Mining Tribunal hearing:
(g) SRCC propose that we objectors (ASF, STC) along with SRCC and MRT meet with Western Metals a.s.a.p. (this month) in Burnie (NW Tasmania) to resolve any differences to allow the EL to go ahead. SRCC are concerned that if the company fails to get its reprocessing procedure to work and the future operation does not get off the ground for whatever reason (including technical difficulties), we (cavers and especially SRCC) will be blamed for the demise because we hindered the company in its access to limestone. MRT gave an assurance that SRCC (and others) would not get blamed!!

(h) MRT requested that ASF (Arthur Clarke) meet privately with MRT officials at their offices at Rosny (in Hobart) to discuss ASF concerns and the ASF requirement for a karst assessment prior to the EL. MRT added that if ASF wanted an independent karst assessment this might be possible, but Western Metals would be unlikely to pay for that if it did not have an EL in place, if only because shareholders would query the expense when it was not being conducted as part of an exploration programme.

(i) MRT also expressed concern that they had a Ministerial brief to ensure that proposed Exploration Licenses were advanced as quickly as possible, without delay and this current scenario was potentially going to cause them (MRT) some embarrassment if having to be delayed further and go to another court hearing.

(j) MRT stated that it would be very unlikely for STC or ASF to gain Legal Standing to oppose the EL in any subsequent hearing of the Mining Tribunal. However, if we (STC and ASF) allow the EL to continue and some time further down the track there is a mining proposal, the company would have to perform an Environmental Management Plan or Environmental Impact Statement which would be available for public scrutiny and we (ASF) like other members of the public would then have legal standing to oppose (or suggest amendments to) the mining proposal.

[The recent decision by SRCC to withdraw their opposition to the EL, obviously weakens the position of ASF (and STC). SRCC may have possibly proved a reasonable case for Legal Standing in the EL area by virtue of their decade or more of karst exploration activity in the area, the presence of their caving hut on the North Forests lease and holding the key to the access gate boom barrier leading into forest leases bordering the karst and EL area.] However, I believe a case for standing can be presented for ASF if a future court hearing happens – a case that might even carry STC in on the "apron strings" of ASF.

If STC wants to continue its opposition to the EL, they will need to reinforce their position statement including their request for representation by ASF, as well as showing some evidence of more tangible support for the ASF representative – including possible fieldwork in the Mt. Cripps area. If STC wants to withdraw its objection a decision will need to be made soon and a letter sent to MRT.

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Trips to Remote and Isolated Karst Areas on the Gordon River

Jol Desmarchelier & Jeff Butt

Party: Jol Desmarchelier, Jeff Butt, Jenny Deakin, Ben Martin (Hydro), Cameron McCarthy (Hydro)

As you may be aware, the Government/Hydro are proposing to connect the Victorian and Tasmanian electricity grids via an undersea cable, the so called BASSLINK Project. There are a host of potential impacts upon the many aspects of this project that have/are being addressed in an Environmental Impact Study. A tiny part of this study was to assess any likely effects that changes in Hydro-electric controlled river flows would have on the Gordon River Karst.

Enter Jol and Jeff (STC members with hats of Karst Geomorphologist and Speleologist) who teamed up with Jenny Deakin (an Irish Hydrogeologist) to form the 'Triple J Karst Team'. Add a couple of Hydro hydrographers/experienced Gordon River coxswains and you've got our little Research team. Neill Doran from Parks and Wildlife, capably assisted by Suzette ? also did some work on the cave fauna in the area. We must say we find professional caving great!

Our versatile transport, a boat slung under a chopper...better than an Orana! Photo by Jeff.

Anyway, during August and September this year (not the best time for field work in the South-West, needless to say, it drizzled somewhat!!) we were set to work. We had the opportunity to investigate three karst areas on the Gordon River; specifically the Nicholls Range (NR) and Gordon-Sprent (GS), both limestone karsts and an area of dolomite karst upstream of the Gordon Splits. This area has only recently been "discovered" as it was previously classified as quartzite on the geological map. The area has been assigned the name "Gordon-Albert" (GA) as it just downstream from the confluence of the Albert and Gordon Rivers. A summary of our work in each of these areas is included below. More complete details of our work can be found in Deakin et. al, (2000).

The areas we were investigating have had very few trips due to their remoteness and limited potential for cave development. Then the driving force for these trips was primarily the threats to Karst from Hydro Industrialisation. These previous trips by local and mainland caving clubs (e.g. Hawkins et. al. (1974), Kiernan (1975), Middleton (1977), (1982); Middleton and Sefton (1982) have involved major expeditions during the

Main entrance to Bill Neilson Cave (NR1), note the silt banks. The Gordon River is beyond the greenery. Photo by Jeff.

Jenny pointing out an inundation line in NR1. Photo by Jeff.

summer months prior to the commissioning of the Gordon Power Station in the summer of 1977/8. Most of these trips accessed the area by coming up the Gordon River in various sorts of water craft, e.g. Jet boats, tinnies, canoes. Of course the HEC had trips there too (e.g. Roberts (1971a), (1971b); Naqvi (1979); with the HEC and Cavers generally working to opposing objectives.

We had the assistance of a helicopter, a couple of boats and the Gordon Power station locked off (or down to very low levels) so most our work was made somewhat jolly and significantly easier than going caving almost anywhere else....i.e. mechanised devices took us right to the cave entrance, or in same cases just inside!

A summary of our work in each of the areas investigated is presented below.

Nicholls Range:

The Nicholls Range area received the most attention from the early expeditions as numerous dolines and several horizontal caves were found. The 1985 Karst index lists nine caves in this area.

The largest cave is Bill Neilson Cave (NR1) with a length of approximately 600 m. Dimensions in this cave are comparable to Judd's Cavern in the Cracroft. NR1 has a stream running its entire length with a plethora of daylight holes in the roof and discharges directly into the Gordon River. When the Gordon power station is running with at full load (~270 cumecs) the Gordon River rises about 2 m in the region of the cave entrance and the water flows into the cave, inundating the first ~100 m. If the Denison is flowing well, the Gordon rises more; typically the variation in the height of the Gordon River at the cave entrance is up to 3.5 m (in which case the inundation extends ~200 m into the cave). We re-surveyed this cave (we were particularly interested in the levels in relation to inundation frequency) and also explored and surveyed an upper level which was not looked at on earlier trips; this yielded yet another (~15th) entrance (probably the smallest accessible one!) to the system. A copy of our survey is shown. As part of our work we wanted to compare what NR1 was like now, as opposed to what it was like 25 years ago when surveyed by SSS in 1976, see Hawkins (1976). There appears to be differences in the amount of stream-side sediments in the first ~100 m of the cave, with less cobbles and more silt banks present now than in 1976.

The stream in NR1 responds very quickly to surface rain events as on two consecutive trips the water level and flow velocity of the stream were markedly different from the previous day after overnight rain (e.g. went from ~40 lits/sec to 400 lits/sec after 20 mm of rain). For a period we had water level recorders installed in the cave to monitor effects of both rainfall and inundation.

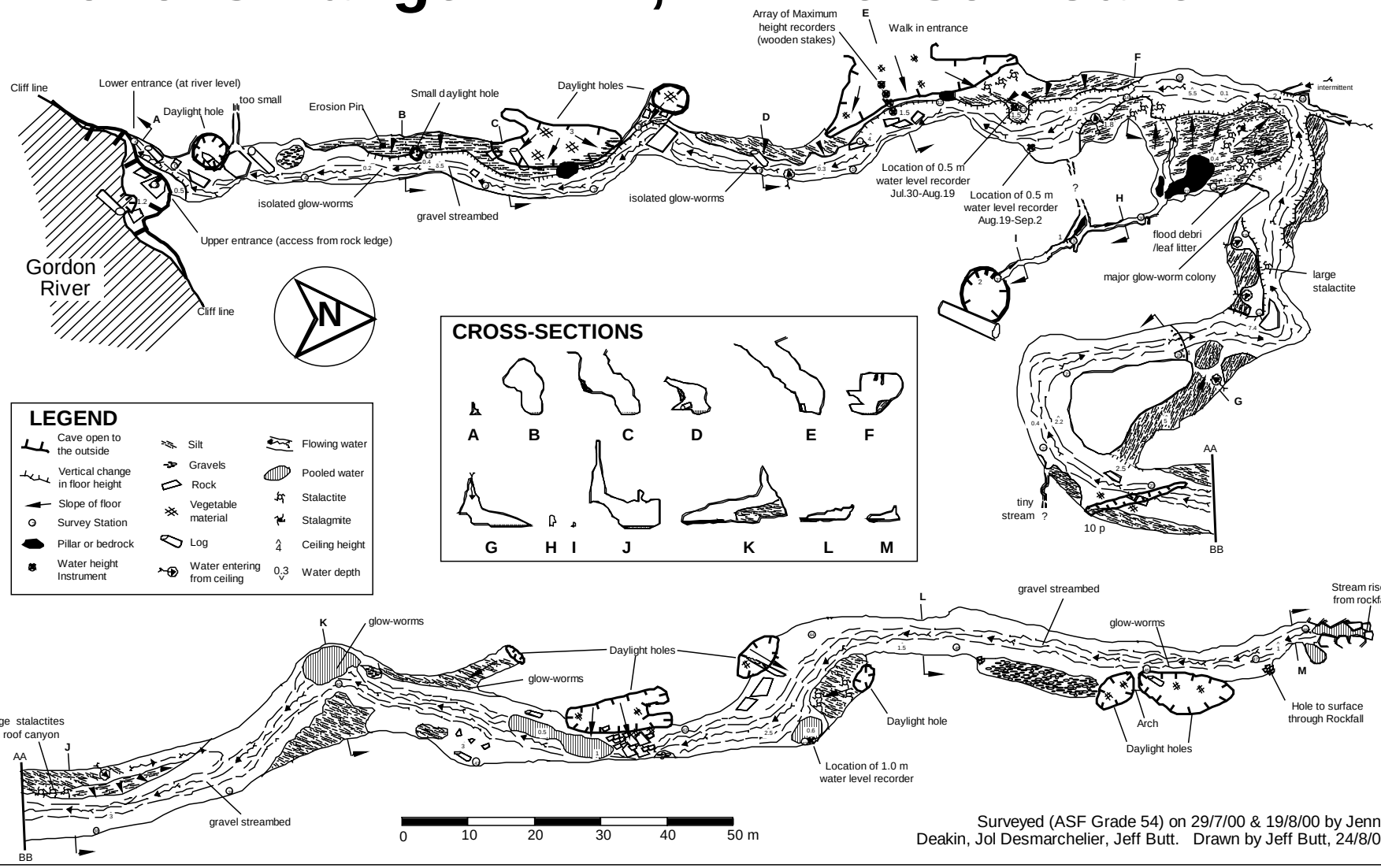
We also surveyed Kayak Kavern (NR2), a shelter cave of around 20 m diameter and approximately 30 m upstream of NR1. Again we compared our survey with that obtained in 1976....the surveys are to different grades, however it appears that over the last 25 years there has been some significant siltation in the 'bay'. Along the Gordon River there is plenty of evidence, e.g. eroding and collapsing river banks and the deposition of silt in the river to suggest that there are significant movements of silt occurring. One of our recommendations was to monitor erosion pins that we installed in both NR1 and NR2; erosion pins are already monitored at many sites on the riverbanks.

We also did some surface thrashing at the upstream end off the cliff hosting NR1 and NR2, where a large stream emerges. Several small stream caves and dolines were found which seemed to be linked but they were not fully explored.

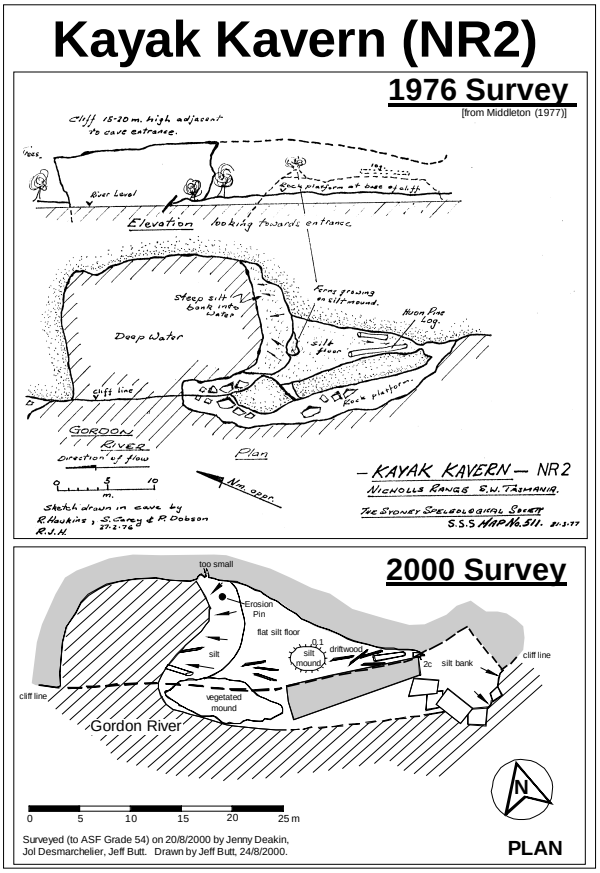
Most of the other known caves in the area are all 'inland', and were thus outside the normal influence of the Gordon River and outside our study area. Of course there were also caves that we either couldn't locate or didn't have any location information for (e.g. NR3 and NR4).

Jenny standing on the 'beach' in Kayak Kavern (NR2). Photo by Jeff.

Nicholls Range: NR1, Bill Neilson Cave. PLAN



Surveyed (ASF Grade 54) on 29/7/00 & 19/8/00 by Jenny Deakin, Jol Desmarchelier, Jeff Butt. Drawn by Jeff Butt, 24/8/00.



Gordon-Albert:

Since this dolomite area was not known about until earlier this year, the area has received no attention from cavers and it will probably remain this way. This area, being upstream of the 1st & 2nd Gordon Splits and downstream of the Abel Gorge (or 3rd Gordon Split) is pretty well guarded by the difficulty in getting upstream through the lower splits and the threat of Power Station operations when approaching from the upstream side.

There are a number of karst landform features including solution pockets, karren, streams with steep sided dolomite banks, small dolines, springs and surface streams, and one small hole (Landing Hole, GA-X1, untagged). This "cave" was not entered or explored as the entrance required digging, its potential for going anywhere is about nil as it sits about 5 m above and 10 m away from the Gordon River. The limited relief, the insolubility of the dolomite, and the difficulty and effort required (yes, we did get out of the boat and into the scrub in this area) in getting there means that this area will probably remain largely unexplored for sometime. The potential for future discoveries is quite high but it remains to be seen as to whether these are large caverns or just grotty little holes in the ground (we put our money on the latter!).

Gordon-Sprent:

The 1985 Karst index lists eleven caves in this area. We did not spend much time in this area as it is a long-way downstream and any effects of the power-station are diluted by natural variations in the other major tributaries upstream (e.g. Albert, Orange, Olga, Denison and Sprent Rivers).

Our work here mainly involved mapping the extent of the karst and looking for any karst development. Several attempts were made to enter the Rocky Sprent Cave (GS4) but these were foiled by outboard problems and high and fast water levels in the Gordon and Sprent Rivers. We managed to gain access some weeks later, you may be interested to noted that Rocky Sprent Cave is not a very exciting cave, but it can be exciting getting in there! GS4 is about 30 m in length, 1 m wide formed in steeply bedded limestone. Beyond the 'cave' a stream canyon that extends for about 50 m.

We did one brief excursion off the river to have a look at the contact between the limestone and "conglomerate" (which looks suspiciously like quartzite). We also followed a stream down to the Gordon River, winding our way through a limestone canyon (5 m deep by approximately 1.5 m wide) for around 50 metres until we came to a 20 m wide bridge/cave. We did not enter due to an absence of lights but climbed over the top and followed the stream a bit further (~30 m). The stream disappeared into the limestone again but this time we followed it and emerged onto the bank of the Gordon River. Ben seemed to enjoy fighting off the masses of cave crickets as we clambered and squeezed our way through the 10 metres of cave to the River! There appears to be limited karst development and little cave development although a couple of small entrances were located they were not explored due to time constraints.

Acknowledgements:

A special thanks to Ben and Cameron for safely navigating the River and for lightening up the dinner conversations when they got too work-heavy!

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Montagu Caves To Be Protected

Greg Middleton

The Private Forest Reserve Program, operating out of the Department of Primary Industries, Water & Environment and primarily funded by the Commonwealth through the Natural Heritage Trust in the wake of the Tasmanian Regional Forest Agreement, has announced the purchase of 2,000 hectares of forest in Tasmania's North-West (Sayer 2000).

This will become a reserve to protect the State's largest remaining stand of Eucalyptus Brookeriana and a series of caves containing bones of giant creatures more than 100,000 years old. The 17 Mile Plain Reserve is being purchased from North Forest Products for $1.35 million, the largest purchase yet through the Private Forest Reserve Program.

Although surrounded by forestry operations and plantations, the area has been saved from intensive forest development because it is 'too wet to log commercially'.

The caves are in Precambrian dolomite with an altitudinal range of 0-6 m above sea level. Kiernan (1995) records the extent of the outcrop as less than 2 sq. km but suspects that more than 50 sq. km is underlain by dolomite. The caves are generally low, though Kiernan (1973) describes them as 'surprisingly spacious'; they almost fill with water during Winter. Sayer (2000) says the caves were discovered in 1956 but gives no details. He says the megafauna were found in the early 1970s. This was described by Goede & Murray (1976), Murray & Goede (1977) and by Murray (1978).

A concise description of the karst and its known caves was given by Kiernan (1973), including plans of MU 201-202 and MU 203-204-205. The caves are fairly well decorated with speleothems, particularly stalactites, in the wetter sections. The bones occur in thick deposits of reddish-brown cave earth, reaching more than 2 m in depth. Rumour has it that the DPIWE Karst Geomorphologist has recently made some new discoveries of sub-fossils.

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Splash Pot (JF10)-Chasing Difficult Leads: 24/9/2000

Rolan Eberhard & Jeff Butt

Party: Rolan Eberhard, Andras Galambos, Dave Rasch, Jeff Butt.

As those who have been down 'Harrow the Marrow' will know, at times the small waterfall gets blown sideways over you. At the far side of the shaft there appears to be a window through to the origin of the major draft (Rolan suggested that this area be named 'Hurricane Wall'), but getting to it would be something of a monumental aid-climbing undertaking. At the bottom of 'Harrow the Marrow', one side passage (heading SSE) ended with a climb to a possible passage. Rolan was keen to check this out as it was possible that it might provide a route through to 'new cave'. Dave was shortly off to Antarctica for a 5 month stint and so was in need of a 'farewell caving fix'. Andras is always keen, myself likewise so we booked ourselves up for a trip. For me, it was to be trip 10 through Close to the Bone, something of a milestone of mental behaviour.

I also had grandiose ideas of doing some derigging with this trip as well.....but, you know the story...long trip, full packs (lots of climbing gear)....let's leave it till next time! Recent conditions in the Junee had been wet as well, which meant that Splash Pot was the wettest I'd seen it. The entrance pitch series was wet, and the two small pitches after Close to the Bone were even wetter; some re-rigging was required here to avoid a total soaking. The normally small streamway that plummets over Harrow the Marrow was about 3 times normal flow. A bit of a discussion resulted in Andras getting the short straw; to accompany Rolan down Harrow the Marrow to belay him up the climb; (Rolan's report on this climb is below).

Dave and I headed off to check out some of the ~10 leads left in Mad Englishman and Dogs. We did find quite a bit of new passage in the region where K.D. isn't far off, but alas, no break-throughs. Most of the new cave found was of 'Raschian' size. All up we surveyed another 160 m of passage, bringing the surveyed length of Splash Pot up to the 2.3 km mark. For a change we actually 'knocked off' more leads than we found, so the ~30 leads left in this cave is now down to ~20! But there is still some work to do!! Three charcoal detectors were also placed in streams in preparation for some dye-tracing to be done in the near future.

Back at our rendezvous point, we read a note from Rolan saying that Andras and he were pretty buggered and were heading out. We grabbed our share of the climbing gear and started out. At this time, any idea of derigging was out of the question...the derig trip needs to be a single purpose trip! As mentioned above, there are still a number of leads left to survey/explore, and so it is likely that the purpose derig trip is still a way off!

We caught up with each other at the main pitch series, and all will torn trogsuits negotiated the final torturous part of the cave to make the outside. Another useful trip down Splash Pot...but it's not over yet!!

Jeff

Here's Rolan's report of what happened down below.

Andras had offerred to belay, so we left Jeff and Dave and headed down Harrow the Marrow. Water levels were up and the 113 m abseil was severely damp, we were both drenched by the time we reached the base of the pitch. Being wet was no joy for Andras, as he would be standing around on belay duty for the next couple of hours. In the event, the climb went fairly smoothly, notwithstanding shattered rock and cracks that tended to expand rather alarmingly under the force of loaded nuts and cams (aid climbing techniques were used). About 20 m up I reached a sloping ledge strewn with loose rubble and perched boulders-seen from the bottom, this feature had made me mildly optimistic that the vertical wall might give way to a horizontal continuation. However, instead of the hoped-for passage, there was a dead-end area of broken rock in one direction and a possible continuation upwards through big jumbled boulders in the other. I didn't pursue the latter possibility as the primary objective had been to reach the ledge and we weren't prepared for a multi-pitch effort. While this lead is still 'going', I'm not heading back in a rush.

Andras lowered me off and we beat a retreat to the base of Harrow the Marrow. As he was cold from the inactivity of belaying, Andras had first go on the rope, benefiting from a sideways tie at the bottom, which kept the rope out of the full force of the water. I didn't have this luxury and the big wind, which hits you about 30 m down the pitch, was blowing the waterfall sideways so that it hosed back and forth across rope. This was even though it was rigged out of the water at the top of the shaft by a series of well-placed bolts by Jeff. I got a good water blasting on the way up, being forced to hold my breath every now and again as a survival measure.

Thanks to Andras for his belay effort, also Jeff and Dave for their help in dragging the climbing gear through Close to the Bone. For the record, the climb is located near the base of Harrow the Marrow. Here, there are two ways on: one is a descending passage which takes the stream from the waterfall; the other is a dry passage which leads to an ascending slope. After no great distance the slope becomes progressively steep to the point of verticality, which was where the climb commenced.

Rolan

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JF69, Water Tracing and some New Finds: 12/11/2000

Jeff Butt

Party: Jol Desmarchelier, Jeff Butt.

To attempt to unravel some of 'which stream is which' amongst JF69, JF40 and Splash Pot (JF10) we headed up to the Junee to do some dye tracing. On the last trip to Splash Pot (24/9/00), 3 charcoal detectors were placed in streams therein. We headed into K.D. and placed a detector in the main tributary (~0.2 litres/sec) to the Serpentine route (90 m East and 2 m lower than the downstream end of JF69), which was the 'best guess' for where the water from JF69 goes. Other known options were that it might appear in Splash Pot (~110 m Southeast and 50 m down), in which case some of the installed detectors should register a positive result. Of course there are probably other options that we don't know about (yet)!

We cruised into the nearby JF69 and added about 100 g of Fluorescein to the stream (flowing at about 0.2 litres/sec). We then headed back to K.D. to install a detector and to monitor the streamway whilst looking for 'missed' leads. After an hour there was no signs of the dye, so we headed back to JF69 to have a decent look at the upstream end of this cave. When Trevor Wailes and I visited this cave on 17/8//00, (see Spiel 320, page 11) we only roughly surveyed this region of the cave and did not push a low flattener. After looking at the survey data, it became apparent that this area of the cave extends to about 10 m from the JF4 entrance and so we thought it worthwhile to have a bit of poke around this area and to fully survey the region.

At the low flattener Jol dug out and pushed aside some of the problem cobbles and squeezed through, instead of pinching off, the passage enlarged and a 4 m floor canyon was reached which soon cut into the side of an aven about 8 m high and 4 m in diameter. We wondered if we had made it to K.D., but once we got down the dicky climb into the base of the aven it became apparent that we hadn't. There was water coming down into this area from several sources (this area is underneath the stream just outside the K.D. swallet; obviously this stream is somewhat 'lossy'), and disappeared down several chossy wombat sized holes that went at least 3 m down into the floor. Another intersecting passage revealed a waterfall coming down a series of precariously stacked blocks and water running down a narrow rift, before disappearing down another Wombat sized hole. Thus we now have found another streamlet that might head down to Splash Pot (which is 29 m horizontally and 55 m vertically away). The top of the 8 m aven appeared to be composed of Permian rocks that overlay the limestone. The survey data indicates that we made it to within 7.5 m of K.D.; the region of closest approach is the area just at the start of the Serpentine Route, after the entrance constriction. However prospects for a connection from either side aren't good.

We retreated to the surface and headed back into K.D. for a final check for dye; no joy, so we recovered the detector. We had a bit of a wander around the K.D. stream above the contact. We noted that there was another small stream in a gully to the right of the main gully that sinks about 50 m up from K.D., this is yet another possible source for main tributary in the Serpentine route.

The afternoon was still young so we headed over to JF40 to have another look for the number tag (no success) and to give Jol a bit of a tour. The JF40 streamway was running at about 0.5 litres/sec and Jol declined to lie in it to check out 'mad-Phils dig lead' at the lowest point of the cave.

Our route back to the car involved several wanderings, down to the K.D. gully first for a bit of a look, then off into the brakeny scrub in the region where the fabled Hairygoat Hole (JF15) is believed to be.....we found plenty of 'significant trees' and very 'true to description' sites, but unfortunately no JF15 (or any hole for that matter). With '5 caves' under our belt for the day, including some new stuff we felt like we'd had a good little day.

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The Longest and Deepest Caves in Tasmania-An Update.

Jeff Butt

We haven't seen an updated copy of the Longest and Deepest Tasmanian caves in the Spiel for some time, and since it's the end of the Millennium, I thought I'd try and put together some lists. Since it's a first 'cut', there may be some oversights or errors (e.g. Prohibition Cave at Mole Creek is one 'long' cave that comes to mind as not appearing in 'The Longest' table...does anyone out there have this information?), but these can be corrected in the future as information comes to hand. It is worth noting that some of the depths and lengths are based on incomplete surveys and may include some estimates for unsurveyed portions.

For Cave Systems, only a single entry appears for the Depth, this is based on the depth from the highest Entrance to the lowest part of the System. Depths for the other entrances to Systems have not been included, but they probably should have their own entry! I'm not sure what the 'norm' is here.

My information has come from various sources, including previously published lists of 'The Longest and Deepest' (e.g. Eberhard (1995), Butt (1995)), the somewhat dated 1985 ASF Karst Index and a knowledge of current survey projects.

Whilst looking at the Tables, several things become obvious:

- what about the Exit Cave resurvey, it's pretty poor when our longest cave hasn't been fully mapped?
- the STC survey data archive needs quite a bit of work.....it doesn't contain any data for some caves that were surveyed by TCC/SCS.
- that any of the caves we have systematically explored and surveyed in recent times have grown significantly in length, and some in depth. The same would probably be true for many of the other caves that were surveyed many years ago.

If one was to keep going with lists, then we could also have Tables of 'The Longest Pitch', 'The Largest Chamber', 'The Nastiest Squeeze', 'The Longest Dive', 'The Most Decorated Cave' and so on, but that's enough for this Spiel!

The Deepest	Cave	Depth (m)	Area
1	Niggly Cave	375	JF
2	Anne-A-Kananda	373	MA
3	Ice Tube-Growling Swallet System	360	JF
4	Splash Pot	306	JF
5	Cauldron Pot	305	JF
6	JF5-Khazad Dum System	285	JF
7	Serendipity	278	JF
8	Rift Cave-Threefortyone System	249	JF
9	Tassy Pot	238	JF
10	Arrakis	235	MW
11	Niagara Pot	230	JF
12	Owl Pot	225	JF
13	Mini Martin-Exit Cave System	220	IB
14	Milk Run	208	IB
15	Sesame	207	JF
16	Flick Mint's Hole	204	JF
17	Midnight Hole-Mystery Creek Cave	203	IB
18	Porcupine Pot	202	JF
19	The Chairman	197	JF
20	Big Tree Pot	190	IB
21	Peanut Brittle Pot	186	JF
22	Deep Thought	183	MA
23	Udensala	181	JF
24	Lost Pot	175	JF
25	Top Hole-Croesus Cave	174	MC

The Longest	Cave	Length (m)	Area
1	Exit Cave	23000	IB
2	Growling Swallet System	12000	JF
3	Threefortyone-Rift Cave System	9000	JF
4	Herbert's Pot	5730	MC
5	Wargata Mina (Judd's Cavern) System	4283	C
6	Kubla Khan System	4027	MC
7	Niggly Cave	3400	JF
8	Khazad-Dum System	3280	JF
9	Bauhaus System	3077	PB
10	Wolf Hole	3030	H
11	Anne-A-Kananda	3000	MA
12	Serendipity	2948	JF
13	Little Grunt	2644	IB
14	Porcupine Pot	2531	JF
15	Splash Pot	2305	JF
16	Salisbury River Cave	2300	VF
17	Wet Cave-Georgies Hall System	2290	MC
18	Croesus Cave	2050	MC
19	Pyramid Cave System	2000	MC
20	Welcome Stranger	1650	JF
21	Newdegate Cave	1600	H
22	Sesame Cave	1300	JF
23	Damper Cave	1282	PB
24	The Chairman	1216	JF
25	Burning Down the House	1200	JF

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Eberhard R. (1995) Recent Discoveries in Niggly and Sesame Caves, Junee-Florentine Karst. Southern Caver 59, p7-12.

Butt J. (1995) The Top Ten Caves in Tasmania-an update. Southern Caver 59, p15.

ASF (1985) ASF Karst Index.

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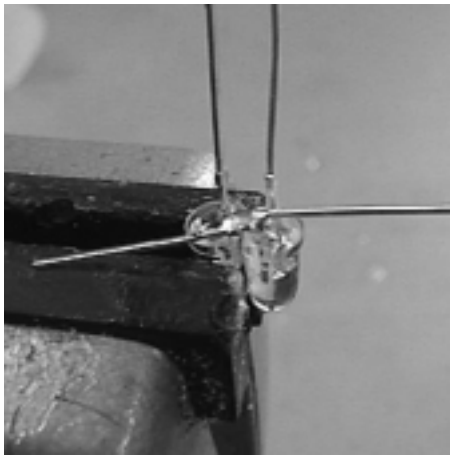
Ultra-Reliable Secondary Bulb for 6V Gel-cell Caving Light Systems.

Dave Rasch

I wanted to make an ultra-reliable secondary bulb that cast more light than my current incandescent bulb. I bought two High-brightness (4000 mcd) white LED's , total cost around $15. From the data sheet supplied with the LED's, I noticed that if I

divide the 6.8V lead acid voltage by two, then 3.4V per LED should give a current of about 15 mA. *[A gel-cell when fully charged produces about 6.2V, and this gradually ramps down to about 5.8V as the battery is discharged and then falls more rapidly to about 5.4V by which stage the battery is flat. So, for most of the discharge cycle the voltage stays near 6V and thus each LED runs at about 3V. Ed.]* OK, it's not really utilising the full potential of the high-intensity LED's, but then again no power is wasted in voltage-dropping resistors either!



I then did the following:

1. Broke out and removed the innards of a conventional secondary bulb to get the screw base (photo above left).
2. Filed flat one side of each LED and glued them together with Superglue, (making sure they were opposite way around!), then soldered one lead of each together (photo lower left).
3. Removed the solder from the bottom of the bulb base, and trimmed the leads so the LED'S would pop in easily (photo above right).
4. Placed the long lead through the holder (to prevent epoxy dripping out the bottom) then filled the bulb base with epoxy. I think it would be especially important to make sure the epoxy fills the bulb base completely, so there isn't a space for water to collect. Then I slipped the LED'S home and soldered the base and side connections. Finally, I added a bit more epoxy around the top-the heat of soldering helps the epoxy to flow (photo lower right).

Finished! Initial brightness looks good, although I still have to test it out in a real cave environment. *[For those who don't know, Dave is currently at Davis, Antarctica....the only caves there are somewhat whiter and brighter than here. Ed.]*

Now the only thing remaining is to check that my battery polarity is correct in my headpiece. This bulb only works with one polarity!

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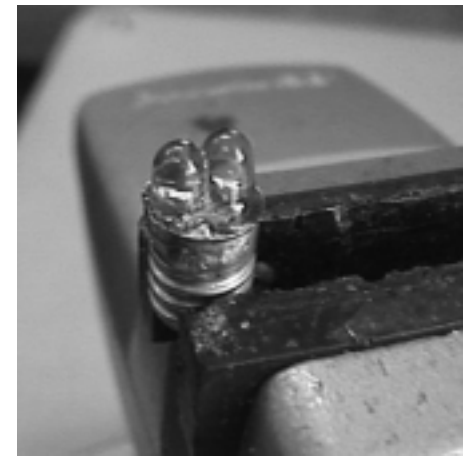

Miserly Lighting Tips

If you are going on a long trip and want to get more hours out of your caving lamp, then consider changing to a lower power main bulb, e.g. putting a Low Beam bulb in the High beam bulb position. This can increase your hours of illumination by about 40 % (based on 3W high beam, 1.8 W low beam). A Low beam bulb placed in the High beam bulb position generally provides you with much more light and a better spread than a standard low beam bulb in the Low beam bulb position.

Many cavers carry a 'Mini mag' torch as the ultimate backup (i.e. the third independent light source), which is often worn around the neck. Since your 'Mini mag' goes with you everywhere, even when you stash your pack.....this means that it sometimes operates as your second independent light source. Anyway, you can replace your Mini Mag bulb with a high intensity Light Emitting Diode (LED). A typical Mini Mag bulb draws 250 mA, whereas a typical LED draws around 1/10th of the current, i.e. 25 mA, which means that you can get 10 times as long out of a set of batteries. The only trick is that you need to cut down the LED leads, and also get the Polarity correct.

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30 Years Ago.

I've been doing a bit of reading old Spiels....thought that you might be interested in what was going on 30 years ago.....we are still looking at (or for!!!) the same caves.

From Speleo-Spiels 51 (October 1970) and 52 (November 1970), which incidentally cost 10 cents each, were printed by a Gestetner on Foolscap paper, and amounted to 7 and 4 pages in length respectively.

A new Speleological Technique, to wit 'The Hairy Goat technique' was producing vast numbers of new holes in the Junee area. A complete discussion of this technique was presented by A.(nonymous) H. Goat, B.Sc., F.M.H.S. (Foundation Member of the Hairygoat Society)....visit the library if you want to know more!

There were a couple of trips down a new hole.....Splash Pot no less, and the JF10 number tag was affixed (also JF9 and JF11 were numbered). Exploration (on ladders of course!) made it to the narrow stuff at a depth of 320'.

Another promising hole was discovered by use of the Hairygoat Technique. This hole was named 'Hairygoat Hole' (and later numbered JF15). There were a couple of trips down this (ladders again) and it was 'bottomed' at an impenetrable dig (which drafted and could be seen to open up after 12') at a depth of 150'. A survey was shown, which is reproduced here for interest. [Maybe this will excite a few bods to come and help search for this cave one fine day.]

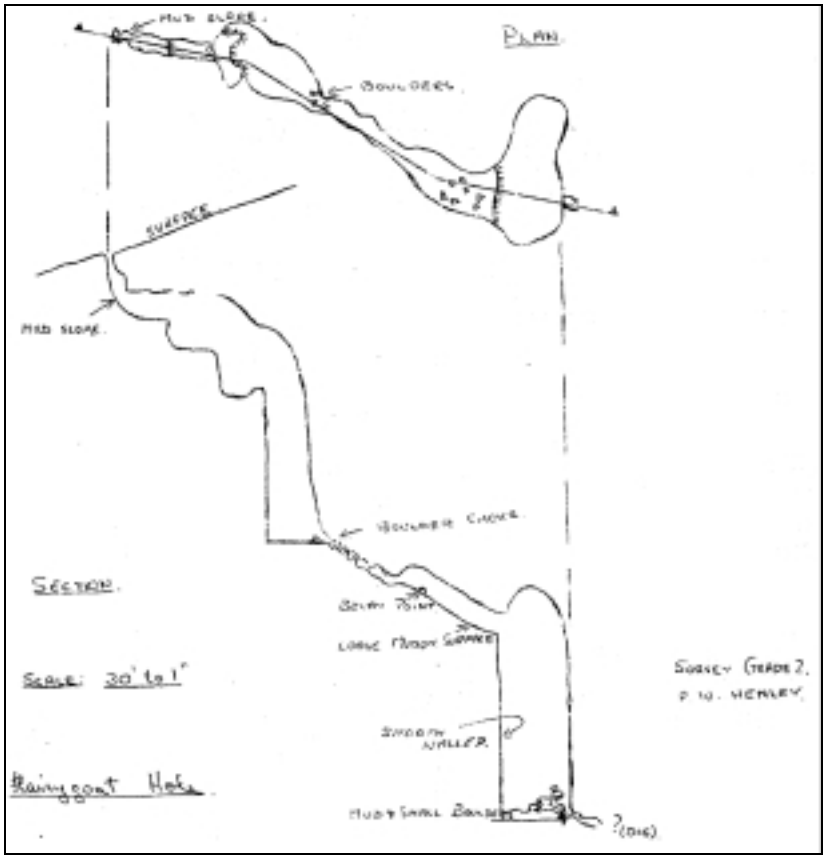
The 'infamous' yellow taped track existed between Splash Pot and Hairygoat Hole (just wish we could find it, or

The Hairy Goat Technique in action, from Speleo-Spiel 51.

better still JF15, now!!) [Are there any tips from out there??]

In between the 'hard trips' there were slacker ones too; to Welcome Stranger and Newdegate Cave. In Newdegate the "SCS-WASG Zoo" (mud models) was discovered beyond the Mystery Chamber....and some new 'animals' were added to the collection.

There were also investigatory trips to new areas, including an attempt to get to the upper Weld River. Access near Mt. Bowes was via the Port Davey Track, but the party instead ended up on the wrong track and in the Mt. Mueller area. There was a hugely popular trip (17 participants) to the NE of Tassie (Pyengana area) where only one small cave was found....but a good time was had!



Grade 2 Survey of Hairygoat Hole by P.W. Henley, from Speleo-Spiel 52.

There were reports of and congratulations to SCS for reaching a depth of 580' in Tassy Pot.

Stuart Nicholas was accepted as a Junior member, and Albert Goede's name was on nearly every trip report. Kevin Kiernan's name appeared on a couple too.

The Spiel ended with a quote from Lewis Carroll's "Through the Looking Glass", pertaining to Hairygoat Hole.....*said Humpty Dumpty, - "I meant by 'impenetrability' that we've had enough of that subject, and it would be just as well if you'd mention what you mean to do next,..."* Which seems to be a fitting way to end this segment. JB

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Wolf Hole-Surveying and Lyre-bird Rescue: 29/10/2000

Jeff Butt

Party: Andras Galambos, Hugh Fitzgerald, Jeff Butt

This was a post-flu recovery trip, designed to be low stress but to still do something useful by tidying up some loose ends with the survey.

First we headed to "Amazing", and sent Andras (who has the ability to bend like an eel) through the tight wet section at the end; he emerged back on the main drag. We surveyed this loop into the system.

Then to Lake Pluto for lunch and to admire the views. It was Andras's first trip to the cave, so we did a bit of sight-seeing as well. I took Hugh and Andras up the Cub-Hole passage, then they foolishly followed me to the back of Lake Pluto....which was overflowing at the outlet, but more importantly was over crutch deep. We slithered our way to Lake Charon for a look too; there were several 'new' pools en-route, the water levels in this part of the cave are probably now more like normal than they were during the 'big-dry'.

Next step was to survey the "Mud Brick Factory", which we accomplished without any great drama. There was some water in the lower parts of this area as well; in addition the nice mud-bricks were damp and it looked like they had recently been inundated.

Continuing on with the sight-seeing, we went to the 'end' of the cave; after a senseless 150 m of low crawling we turned around and did the crawl again. Time was nigh for an early departure, so back across the lake we went; Andras narrowly avoiding a swim when he 'found a deep hole'.

At the entrance slope, in the dark zone, I narrowly avoided standing on a Lyre bird chick. When we arrived at the cave there was some lyre bird squawking going on at the surface and in the bottom of the collapse. Andras (a Vet) scruffed the 'asleep' chick, which was definitely no longer asleep and it was undignifiedly carried to the bottom of the entrance collapse and stuffed into my cave pack after I had off-loaded the contents. There was a good deal of commotion above; worried parents could be seen scurrying around on the entrance ramp. I prussiked up with my squawking live cargo and released the chick; which left me with a big poo as a thankyou. Soon enough a reunion occurred and the reprimanding/relieved squawking subsided as junior was taken away from the dangerous hole.

Today's survey tally was a paltry (almost poultry!) 160m, but it did push the surveyed length over the 3 km mark.

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Dwarrowdelf (JF14)-Surveying in the Depths of Moria: 19/11/2000

Jeff Butt

Party: Rolan Eberhard, Andras Galambos, Jeff Butt.

The Depths of Moria were surveyed by D. Martin and S. Worthington way back in 1979 (see Journal of the Sydney Speleological Society, Vol. 23 No. 7, p 168), but we don't have the data (they didn't have a clinometer either), and I know of several passages that this survey did not include. So, to complete our full re-survey of the Khazad Dum-Dwarrowdelf system I had been intending to get around to re-surveying this part of the cave. An email sent out on the STC list-server got a couple of takers, and so on 19/11 Rolan, Andras and I headed up to Dwarrowdelf to do the job.

As we reached the JF14 entrance it was obvious that the huge log (see the cover of Speleo-Spiel 314) had succumbed to the aging process and was now broken in half, with the broken ends resting in the top of the JF14 entrance. The pieces seemed solid enough, but one imagines that sooner or later they'll end up down the entrance pitch to join the other lemming logs already down there.

Anyway we cruised in without any great drama. Most of the spits in the cave are now in rather poor condition; very few were fitted with markers...so that's a little job for the derig trip. Our rope lengths were nearly perfect, but we did end up with one knot half way down the second part of the 37 m 5th pitch.

Since I'd free'd the steep earth slope from the end of the Dwarrowdelf connecting tunnel to the base of the final K.D. waterfall, I hadn't packed a rope to use as a handline here....this was perhaps an oversight, as without any aid this slope is something of a hazard. We did negotiate it OK, but not without some degree of trepidation. I'll take a handline for the next trip!

We headed straight in to Sump 2; the route was straight forward (and a lot easier without packs of diving gear....my last visit here was in 1987 when I helped porter in diving gear for Phil Hill to dive the sump). One of the squeezes seemed somewhat tighter than I remember it and the final bit of stream-passage was nicer than I recall too. Interestingly enough the beautiful looking Sump (Rolan remarked that it looked "very diveable") had the requisite deep greeny/blue colour to it; in fact it seemed to have a fluorescein hue to it.....perhaps the dye we inserted into JF69 a week before had ended up here. Anyway we took a water sample in an attempt to verify whether or not this was the case. [Examination of the water sample under UV didn't show any fluorescence....but the sample has been kept for fluorometric analysis at a later date.]

We surveyed the main drag out to Sump 1, leaving survey markers at the many junctions; at this stage we had a couple of dodgy lamps, so decided to call it quits and head out. Before splitting we had a brief foray up to the highest part of the K.D. basal chamber to admire the contorted bedding in this area; the bedding on one side is nearly horizontal, whilst it is nearly vertical on the other. It appears the chamber (as well as Dwarrowdelf itself) is formed on some sort of fault line. Another trip is needed to complete the survey; so we left the cave rigged and had an easy exit.

The data obtained agrees well with the Plan drawn by Martin and Worthington (their survey was done without a clinometer....and the cross-hair in our clino 'fell out of view' during our survey...but one could see where it had been, so we believe our data to be OK). The data shows that Sump 2 is 94 m from Cauldron Pot, and some 41 m higher. Prospects for a connection here don't look easy, but then again there was a good draught in the Depths of Moria and Martin and Worthington report some leads in the vicinity of Sump 3....so who knows! Anyone in for a trip??

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STC WaReHoUsE SaLeS

Publications

- "Caving Safety 1 Manual", 92 pages, covers Planning, Safety, Maps, Gear, Rigging, Emergencies etc. $18.00
- Back Issues of Southern Caver, Speleo-Spiel. There are various issues available. Please contact the Librarian, Greg Middleton (gregmid@one.net.au) with your requirements. ~$1 each

Gear

- CAVE PACKS, 25 litre volume, made from Heavy duty yellow PVC material, double thickness material at wear points, strong seams, drain holes, large diameter eyelet's, adjustable straps. Good Value. $55.00 each
- Aluminium Bars for Rappel Racks. $5.00 each
- 5 cm (2") plastic Tri-glide buckles, ideal for battery belts, cave packs etc.) $0.80 each
- BATA full-length Gumboots, Size 9, Green with Orange Sole, and steel toecaps. $25.00

Tape

- Edelrid 25 mm tubular tape. Ideal for rigging, chest harnesses etc. (White) $2.00 per m
- 5 cm (2") flat tape (ideal for harnesses, rigging, gear bags, belts etc.) (Blue) $1.50 per m

Safety

- Rivory 10 mm dynamic rope (for cows tails, safety loop) $4.00 per m, e.g. Cowstail $11
- Space Blankets (don't be caught underground without one!) $4.00 each
- Miracle Body Heat Packs (20 hours of portable heat, 50 gm sachets, carry a couple) $2.00 each

Lighting

- Yuasa Gel-cells, 6 Volt, 7 Amp-Hour $24.00 each
- Metal Lamp Brackets, complete with fixing rivets and cable keeper $7.50 each
- Plastic Lamp Brackets, used but in good condition. comes with fixing screws $2.00 each
- Alkaline 4.5 Volt 'flat-pack' batteries (for Petzl Zoom's etc.) $7.00 each
- Eveready 6 Volt, 0.5 Amp Flange Mount Bulbs #1417 (for HIGH Beam) $2.00 each
- Tandy 6 Volt, 0.3 Amp Screw Base Bulbs #50 (for LOW Bean), blister packs of 2 $2.00 each
- Jets (21 litres/hr) for Petzl kaboom (just a couple left) $5.00 each

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

- RETIRED CAVING ROPE, no longer safe enough to use for caving purposes, but more than adequate for many other purposes. Available in various lengths. $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 7006.

Classifieds

CAT SCRATCHING POLE.....saves your Couch, Curtains etc. from your Clawing Cat. The passive component is retired 11 mm Bluewater rope (proceeds to STC) wound around a pine pole (on a self supporting base), standing 63 cm tall. Being stiff Bluewater, this rope is very abrasion resistant and should outlast your kitty's claws! The active component is your clawing cat whose claws grow every day and needs to wear them down....best done on an inexpensive Scratching Pole instead of your Expensive Furnishings. yours for $39

call Jeff, contact details above.

*If you've got something to flog **(Caving related)** then don't forget that the Spiel might be one way to sell it. (Try the List Server too!) It cost's members nothing to have a go, so why not!*