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Cover Photographs
Front: Hans Benisch, Joe Farrell and Jeff Butt testing "P-hangers" at the old Benders Quarry.
Back: The testing team on the move.
Photos by Arthur Clarke.

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. 326, Aug.-Sep. 2001

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

This last year has been a bit of a rocky one for the Speleo-Spiel, but hopefully now we are back on a firmer footing. With Joe Farrell coming aboard, we have an injection of new blood and this is always a good thing for any club. (Along the same lines, in this issue, there is quite a bit of info. about what the various STC positions involve...it would be good to see some more new blood come into the club at the forthcoming Annual General Meeting.) As part of the 'learning curve', I've shown Joe how to put a Spiel together, so you may detect a fair amount of JB flavour in this issue. But, for future editions I'll be stepping aside (but am always available for advice or help in difficult times) to let Joe do his own thing. So, thanks to all the readers out there, but it's time for me to step aside...it's all yours now Joe. Good luck!

Jeff Butt (out-going temporary Editor).

Thanks Jeff for this solid kick start. It is my first time as editor of anything other than uni essays. The fact that these always come back with copious amounts of derogatory red scribble should not affect your expectations of the future quality of this publication. It simply means most people out there can't mark essays. Obviously some aspects of the Spiel will be different (mostly dictated by what my computer can or can't do) but I have no idea which aspects as yet. I like its current format myself.

For those who haven't met me I'm the thing on the front cover with the sideburns and camera round its neck. I've been caving 5-6 years mostly in Mole Creek while office bearing in MCCC and guiding for Parks. I've also caved a bit overseas and am enjoying getting to know the caving scene down here - caves, personalities, etc. Pleased to meet you.

Your feedback and contributions will be really appreciated for the next few Spiels while I suss this editing thing out. Hope to get under ground with yers all too. (whoops, was that a typo already?)

Joe Farrell (incoming Editor).

Club Matters

NOTICE OF THE ANNUAL GENERAL MEETING.

The AGM is being held at 7 p.m.. on Wednesday 7th November at the GEAR STORE, 22 Clutha Place, South Hobart, 7004. Please park in Clutha Place itself, instead of blocking up the 'slip-road'.

Food (pizzas) and drinks supplied, but if you require any specialities it's BYO.

Any Agenda Items for discussion should be presented to the Secretary no later than October 31st.

If you are unable to attend, you may exercise your vote by completing the Proxy/Nomination Form over-leaf and forwarding it with your Proxy to the AGM, or by posting it to the Secretary, STC, P.O. Box 416, Sandy Bay 7006.

Do you want to know what each STC Position Involves? Then see the Article in this Spiel
(reprinted from Spiel 315)

NOTE THAT ANNUAL SUBSCRIPTIONS are due at next months AGM. At present with the uncertainty with the ASF Insurance Scheme, it makes it difficult to decide on STC fees for next year. In the interim it is likely that the STC fees will not be altered, thus, if you cannot attend the Annual General Meeting, then please feel free to use the Membership Renewal Form in this Spiel. Note that if your subscriptions are paid within 3 months of the Annual General Meeting (i.e. by 7/2/2002), then you are entitled to the Prompt Payment Discount.

Movement of Members:

Dave Rasch is shortly to be off for 2 years to live in Washington DC, whilst pursuing a job with National Geographic. We wish him well in the US of A.

Tim Anderson, intrepid adventurer and the key person in the Jane Franklin Hall Caving group as well as STC member is now living in Gatton in South Queensland. No doubt Tim will get up to his usual antics in the local environs.

CAVEX 2001 is going to Happen over Sat/Sun-Nov. 10/11 at Ida Bay.

You will recall that CAVEX 2001 was scheduled to occur in May, but at the last minute had to be cancelled due to a Search. Well, the Police have just advised me that they can fit in CAVEX 2001, on the weekend of Nov. 10/11. As said in the heading, the venue is to be Ida Bay.

The Exercise will run from start to finish, just like in a real situation. BYO food and camping gear; we will be rough-camping at the end of the road to the former Benders Quarry.

The Police will be providing transport (a bus), if you would like to avail yourself of this, and so we can get a handle on numbers, then please let me know as soon as you can. For those taking the bus, it will be an 0800 departure from Police Search and Rescue Headquarters, 76 Federal Street, North Hobart (access from Strahan Street, where there may be some limited parking available.) If you are taking private vehicles, then it will be a 1000 rendezvous at the end of the road.

All levels of experience will be catered for....in addition, we are looking for a couple of volunteers for an 'accident prone caving trip'....if you are interested, then please see me.

Prior to CAVEX, there will be a **RESCUE PRACTISE EVENING**, held at Fruehauf Quarry on the evening of Wednesday October 31st, from 6 p.m. (bring a bite to eat if you like). The aim of this session is to familiarise everyone with the Stretchers and Hauling Systems used in Cave Rescues. Whilst it's not essential that you attend this session prior to CAVEX, it is a good idea!

HELICOPTER TRAINING: for those members interested in becoming familiar with the Rotorlift BK helicopter and it's winching system (rescuers at times may be winched in/out of the machine), we have tentatively planned a familiarisation evening on Wed Nov. 14th. The two hour session (7-9 p.m.) will be held at the Rotorlift premises, Hobart Airport (on the left just before you reach the main airport Carpark). This session is subject to confirmation and numbers, so if you are planning to attend, then please let me know as soon as you can. Thanks.

Jeff Butt (Search and Rescue Officer).

Caving Word Puzzle:
How many caving words can you find? Words can be vertical, horizontal or diagonal. The solution will be in the next Spiel.

M	B	U	R	A	C	K	C	L
O	E	R	P	U	A	Y	R	R
O	N	L	A	Y	V	A	A	I
N	D	E	R	K	E	A	W	F
M	O	A	I	P	E	P	L	T
I	G	D	E	I	A	B	W	A
L	E	V	T	P	R	E	A	D
K	A	O	A	E	T	D	Y	R
C	N	N	L	N	H	A	L	L

SAR News:
Police Search and Rescue advise that: It has recently been decided that volunteers who are called on for Search and Rescues will be entitled to $28.50 per day (this is the State Public Service Camping Allowance) to cover the costs of meals and other expenses. In addition, if any personal gear is 'trashed' in the course of a Search/Rescue, then an application can be made to cover any loss. Applications for the $28.50 allowance or any damaged gear needs to be made on the appropriate paperwork and submitted to the Police Forward Commander at the Search/Rescue concerned.

Gear Store News:
We now have a new 200 m roll of Edelrid 10 mm rope; this will help bolster our stiffening and shortening supply of ropes. It'll probably start as two long lengths, but then will be cut into four shorter pieces to fill holes in our range of useful rope lengths.

Other News.
The Lune River Youth Hostel Burned down in late August, so if you are planning a caving sojourn down at South there is one less Accommodation option just now.

'Off Wednesday' Practise/Training Sessions Begin.
With the imminent introduction of Daylight Savings Time, we will again be blessed with lengthy evenings. As we have done in past years, we are going to have SRT Training/Ropework Fun/Rescue Practise etc. on the 'off-Wednesdays', (i.e. non-STC meeting Wednesdays) evenings. Most sessions will be at Fruehauf Quarry (off Tara Street, South Hobart), but check the Forward Program for details. Most sessions start after work, from 6 p.m. or when you get there!

If you want to learn some new skills, or brush up on some old, then you are very welcome to come along....and please do! Details of what is planned is shown in the Forward Program, opposite. What we do is not that regimented, basically we'll do what the people who turn up want to do. **Please come along and learn some stuff and have some fun!**

Dear Dorothy
here is my dilemma: I am doing a Pull Through trip down a cave with two novices. We have three ropes, two by 20 m and 1 by 40 m. At the head of the second pitch (35 m) I have knotted the ropes together, and from the mess found a rope end and threaded it through the bolt anchors. I did not put a knot in the end of the rope as a 40 m rope will easily reach the bottom. I have just sent the first novice down on the this rope and she reports that the rope doesn't reach the bottom and is now dangling ~17 m above the floor, about 2 m from the end of the unknotted rope. She does not have any prussik gear, or know how to prussik. What should I do?

yours dangerously,
Derrik.

Please forward your solution (and a list of Derrik's errors!) to the Editors, the best will be published in the next Spiel.

FORWARD PROGRAM:

Meetings: are held at the Shipwright Arms Hotel, Battery Point on the FIRST and THIRD Wednesday's of each month. The First meeting is a Business meeting, starts promptly at 8:00 p.m. The Second meeting is a Social gathering, starts around 8:00 p.m.

Wed-Oct. 3: General Meeting
Wed-Oct. 17: Social Meeting
Wed-Nov. 7: ANNUAL GENERAL MEETING, details on Page 2 of this Spiel.
Wed-Nov. 21: Social Meeting.

Training Sessions: are held on 'off-meeting' Wednesday Nights, generally from 6 p.m. Further details can be obtained from Jeff Butt.

Wed-Oct. 10: Basic SRT, Fruehauf Quarry.
Wed-Oct. 24: Mid-rope Rescues, Fruehauf Quarry.
Wed-Oct. 31: Stretcher Hauling, a prelude to CAVEX, Fruehauf Quarry.
Wed-Nov. 14: Helicopter Training, Rotorlift Helicopters at Hobart Airport, 7-9 p.m. To be Confirmed.
Wed-Nov. 28: Advanced 'jiggery pokery', Fruehauf Quarry.

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

Sat-Nov. 3: Exit Cave-Old Ditch Road, Ric Tunney.
Sat/Sun-Nov. 10/11: CAVEX 2001- Cave Rescue Exercise-Ida Bay, Jeff Butt. Join Police, State Emergency and Ambulance personnel to practice cave rescue techniques. A cave with pitches will be used, but there is scope for horizontal cavers too, so don't be put off if you don't SRT!
Sat/Sun-Dec. 30/31:____Mole Creek Weekend, Ric Tunney.__

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

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 7th November, 2001.

If necessary/relevant, please indicate any particular ways your proxy should vote on any resolutions under consideration.

_____

_____

____

_____

____

_____

____

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 __/__/2001

Return this form to the Secretary, STC, PO Box 416, Sandy Bay 7006, by 5:00 p.m. on 5/11/2001, or have your proxy deliver it in person to the AGM.

Southern Tasmanian Caverneers Inc. Membership Renewal Form

I/We:	Member type*	Postal Address
_____	_____	_____
_____	_____	_____
_____	_____	(BH)_____ (AH) _____
_____	_____	(FAX)_____ (MOB) _____
_____	_____	Email: _____@_____

(*Insert "**F**", "**J**", "**H**", "**C**", "**L-ASF**" or "**L-AC**" as appropriate (see below): **F**ull[1]/ **J**unior[2]/ **H**ousehold[3]/ **C**oncession[4]/ **L**ife with full ASF membership[5]/**L**ife with Aust. Caver subscription only[6])

would like to renew my/our membership, and enclose the appropriate membership subscription. Note, that if payment if forwarded before or no later than 3 months of the ANNUAL GENERAL MEETING (i.e. by 4th February 2000), then the PPD (Prompt Payment Discount) rate is applicable.

The amount of my/our payment (cheque/money order payable to "STC") enclosed is $_____

Please forward this form and your payment to: The Treasurer, STC, P.O. Box 416, Sandy Bay 7006. Thanks.

NOTES

1. **F**ull(for persons 18 years or older) **$50.00 ($40.00 PPD).**
2. **J**unior (for persons under 18 years of age) **$30.00 ($25.00 PPD).**
3. **H**ousehold (for two persons 18 years or older and any number of persons under 18 years of age, all having the same residential address) **$75.00 ($62.50 PPD).**

4. **C**oncession (for persons 18 years or older, whom are either Students, unemployed or entitled to some other concession) **$40.00 ($30.00 PPD).**
5. **L**ife with full ASF membership (for life members who are actively caving and require ASF Insurance) **$25.00 ($20.00 PPD).**
6. **L**ife with Aust. Caver subscription only (for life members who are no longer actively caving and do not require ASF Insurance, but would like to receive the *Australian Caver*) **$20.00 (no PPD available).**

The Annual General Meeting-Taking on a position in STC, the Tasks and Time involved.

(reprinted from Speleo-Spiel 315, August-September 1999.)

It's coming up to that time of year again, the "dreaded" Annual General Meeting.

Does any of the following sound familiar??

"Oh yeah, another Annual General Meeting coming up. Boring, boring and I tell you, you have to be careful not to get a job, perhaps it's best not to bother turning up. Yer, but it's good to support the club, so maybe I will come, and anyway there's always some food and drinks supplied, so I may as well go along and get some value out of my subs. I can hide in the back row and avoid getting voted into some job I don't want. I definitely don't want any jobs, I'm just too busy. Anyway, if someone voted me into a position, I wouldn't have any idea of what to do. I'd never volunteer to take on any job for the same reason. Anyway, those people who did the job last year did such a good job, they can just do it all over again. 'So and so' has been doing that job for donkey's years, so they may as well keep doing it. If you do a good job, then you get stuck with the job for ever."

Well you might be able to identify with at least some (but hopefully not too many!!) of these comments, I'm sure we've all had things like this cross our mind at meetings attended in the past. This article is an attempt to try and break down some of the barriers, and to take the 'scariness of the unknown' out of the STC positions. By providing "Job Descriptions" and an estimate of the time required for each of the positions you can get an idea of what each job involves and the sort of responsibilities the person doing them has. Talking with someone who has done the job in the past certainly is a good way to learn what has to be done, and allows you to pick up some good tips about how to make doing the job easier.

The Positions.

Firstly, the positions are divided into two groups, the Executive and the Committee. Each of these two groups is made up of the following positions.

EXECUTIVE

- President
- Vice-President
- Secretary
- Treasurer
- Minute Secretary

COMMITTEE

- Scientific Officer
- Public Officer
- Search & Rescue Officer
- Editor
- Sub-Editors
- Karst Index Officer
- Equipment Officer
- Archivist/ Librarian
- Map Archivist
- Webmaster
- List Server Manager
- Electronic Archivist

plus General Committee Persons and of course there are **Members**. In the days of small clubs, nearly every member ends up with a position on either the Executive or Committee (sounds a bit like "too many Chiefs, not enough Indians", but in reality, it is just "sharing the combined load"). Indeed some members have dual or multiple roles which places an added burden on those people. In an ideal world all the work would be shared around.

What does each position involve?

"Job Descriptions" for each position are given below. Note that these are my interpretations [in due course it would be good to get the Office Holders to fine-tune these Duty Statements] based upon the STC Constitution and from my experience with many similar organisations. By reading each description you should get a good idea of what each position actually involves. An estimate of the amount of work involved with each position is also given to give you a guide. Some people may think that these times are under-estimated, others over-estimated. It is very hard to give an exact amount of time, but the quoted times should give a realistic idea of the time involved once the 'learning curve' is behind you (i.e. when starting a new job, it will take more time, but very quickly you'll 'know the ropes' and will be able to complete the same work in much less time). Some positions have the potential for considerable extra time being spent, for example adding early STC literature to the STC Electronic Archive, compiling and archiving survey data etc.

EXECUTIVE

Job Description-PRESIDENT

The President should lead and represent STC. He/she has overall responsibility for the decisions of STC and the activities of all the members. He/she must have a proven commitment to STC and ideally should be an active caver. Skills in communicating, negotiating, chairing meetings, listening etc., will be needed by an effective President.

Duties:

- Generally oversee the operation of STC and ensure that the Objectives are being met.
- Convene an AGM in the fourth quarter of each year.
- Convene the monthly Business meeting.

- Call and convene a meeting of the Executive when there is urgent business to attend to.
- Countersign cheques as necessary.
- Liaise with groups such as the Australian Speleological Federation as necessary.

Estimated Time Required: 1 hour and 2 meetings (1 Business, 1 Social) per month.

Job Description-VICE-PRESIDENT

The Vice-President should assist the President, and exercise the powers of President in so far as may be necessary in the absence of the President. He/she must have a commitment to STC and ideally should be an active caver. The vice-president's position is often seen as a 'training ground' for future Presidents. Good skills (or the ability to develop these) in communicating, negotiating, chairing meetings, listening etc., will be needed by an effective Vice-President.

Duties:

- Assist the President with overseeing the operation of STC.
- Exercise the powers of President in so far as may be necessary in the absence of the President.
- Countersign cheques as necessary.

Estimated Time Required: <0.5 hours and 2 meetings (1 Business, 1 Social) per month.

Job Description-SECRETARY

The Secretary deals with the day-to-day written affairs of STC, by receiving and co-ordinating correspondence, and by producing and distributing meeting minutes and agendas. The Secretary is often the first contact with STC, and therefore must be knowledgeable about STC activities, caving areas and contact people. An ability to take notes and to summarise meeting decisions clearly and accurately is essential. Good writing skills are needed to enable efficient replies to letters, and distribution of minutes. Access to a computer and the Internet (the easiest way to distribute minutes/agendas) is essential.

Duties:

- Hold the key for the mailbox (currently P. O. Box 416, Sandy Bay, 7006).
- Regularly clear the mailbox and receive all correspondence.
- File letters/accounts received and present them to meetings. (Accounts need to be approved for payment at a meeting, prior to payment.)
- Forward bank statements and approved accounts to the Treasurer.
- Forward other tabled correspondence to the appropriate person(s).
- Write letters/replies to letters, and file a copy of letters sent.
- Obtain a copy of the minutes of meetings (as recorded by the Minutes Secretary) and file these.
- Circulate minutes of meetings to members (within 2 weeks of a meeting).
- Countersign cheques as necessary.

Estimated Time Required: 3-5 hours and 1 Business meeting per month.

Job Description-TREASURER

The Treasurer deals with the day-to-day financial affairs of STC and ensures that STC remains financially solvent. He/she receives and banks money, issues cheques for accounts payable and maintains a comprehensive set of financial books and an Asset register which are audited annually. He/she also acts as Membership Secretary, and maintains a membership list. An ability to meticulously record all transactions clearly and accurately is essential. Good numeracy and writing skills are required for maintaining legible and clear financial records. Access to a computer and the Internet assists with carrying out this position.

Duties:

- Maintain two sets of financial books, the STC Main Account and the STC Science Account. The Main Account is used for normal STC business. The Science Account is used for Scientific endeavours. Currently both accounts are held with the Commonwealth Bank, 81 Elizabeth Street, Hobart.
- Issue receipts for all money received.
- Transfer money recited by other STC officers (Equipment Officer, Librarian etc.)
- Issue cheques as necessary and have them countersigned by another member of the Executive.
- File Bank Statements.
- Close the Books on 30th September each year, and prepare a Financial Statement for the period October 1 to September 30.
- Annually have the books audited by an Auditor (Currently Diane Hext, P.O. Box 148, Rosny Park 7018. phone: 6247 8051).
- At the Annual General Meeting present a copy of the Financial Statement, the Assets List and the Auditors Statement to the meeting for Acceptance.
- Forward a copy of the Financial Statement and the Auditors Statement as an Annual Return to the Office of Corporate Affairs.
- Forward a copy of the Financial Statement and the Auditors Statement to the Editor for Publication.

Membership-List Duties

- Maintain a register of all Membership forms.
- Maintain a list of all members, addresses, contact numbers and email addresses.
- Periodically forward an updated copy of the Membership list to the Editor to facilitate distribution of the Speleo-Spiel and/or any other publications.

Estimated Time Required: 3-5 hours and 1 Business meeting per month. Plus 5-10 hours for the Annual Return.

Job Description-MINUTE SECRETARY

The Minutes Secretary assists the Secretary by recording the minutes at meetings. (The Minutes Secretary job may well be incorporated into the Secretary's job.) An ability to take notes and to summarise meeting decisions clearly and accurately is essential. Accurate and neat writing skills are needed to enable legible transcripts of meetings to be obtained.

Duties:

- Record minutes of meetings and forward these to the Secretary for filing.

Estimated Time Required: 1-2 hours (at each Business meeting) per month.

COMMITTEE

Job Description-SCIENTIFIC OFFICER

The Scientific Officer is responsible for assessing applications that seek to draw upon the funds in the Scientific Account for the purposes of conducting Scientific projects in the Speleological Sphere.

Duties:
- Assess applications seeking financial support from the STC Science account.
- Make recommendations to the Executive in respect of applications seeking financial support.

Estimated Time Required: < 5 hours per annum.

Job Description-PUBLIC OFFICER

The Public Officer is responsible for fulfilling the requirement set out in the Associations Incorporation Act (STC is an incorporated body). This includes being the legal spokesperson for STC in the event of any litigation. Skills include being knowledgeable about STC's activities and the Associations Incorporation Act.

Duties:
- Ensure that Corporate Affairs is notified (using 'Form 6') within 14 days if you change address.
- Ensure that Corporate Affairs is notified (using 'Form 4') of any change to the Constitution within 14 days.
- Ensure that Corporate Affairs is notified (using 'Form 6') of any change in Public Officer within 14 days.
- Act as the representative for STC in the event of any event of a litigious nature occurring.

Estimated Time Required: < 2 hours per annum.

Job Description-SEARCH and RESCUE LIAISON OFFICER

The SAR Liaison Officer must have extensive cave rescue experience and have the respect of both the caving and police SAR communities. He/she must be able to motivate STC members to practise in cave SAR, and to ensure that call out lists and procedures are adequate. The SAR co-ordinator will be aware of the competence of a cross-section of cavers (both within STC and within Tasmania) and be familiar with the major caves and karst areas in Tasmania.

Duties:
- To maintain an Up-to-date Search and Rescue 'Call-Out' list.
- To, in conjunction with the Tasmania Police (Search and Rescue) plan an Annual Search and Rescue Exercise.
- To liaise with Police Search and Rescue and attend (bi-monthly) Search and Rescue Liaison Meetings.
- To be aware of STC's resources and know how they may be required for a Search and/or Rescue event.
- To encourage members to submit incident reports, filing these, and from time to time publishing an analysis.

Estimated Time Required: <1 hour and 1 Liaison meeting per 2 month. Plus 10-20 hours for the Annual Caving Search and Rescue Exercise (CAVEX).

Job Description-EDITOR

The Editor should ensure that STC regularly publishes material keeping Members and the Speleological Community at large up to date with the activities of members of STC. The Editor should be proficient with Word Processing and Desk-top publishing software. Access to a computer, printer, scanner and Internet is essential.

Duties:
- Seek and Collate articles for STC Publications (Speleo-Spiel and any other publications) to give a good coverage of the activities of STC members.
- Produce the *Speleo-Spiel* six times a year.
- Produce an Annual Publication if enough material/interest is available.
- Obtain membership list updates from the Membership List Secretary to ensure that all members receive copies of the Newsletters.
- Mail out Newsletters to all members on the Membership List.
- Ensure that copies of all publications are archived with the STC Librarian, State and National library services.
- Maintain a Mailing list for distribution of Publications to members, subscribers and other Speleological organisations.
- Ensure all publications are securely archived.
- Distribute electronic copies of all publications to the Electronic Archivist for inclusion in the STC archive.

Estimated Time Required: 15-20 hours per issue of the Speleo-Spiel and 1 hour per month for maintaining Mailing lists. An additional 20-30 hours per issue of any additional publication would be required. If Sub-Editors make a contribution, then these times will reduce.

Job Description-SUB-EDITORS

The Sub-Editors should assist with the duties of the Editor. The Sub-Editors should be proficient with Word Processing and Desk-top publishing software. Access to a computer and the Internet is essential.

Duties:
- Assist the Editor with his/her duties.

Estimated Time Required: 5 hours per issue of the Speleo-Spiel. An additional 5-10 hours per issue of any additional publication would be required.

Job Description-KARST INDEX OFFICER

The Karst Index Officer keeps the records relating to new caves/karst features that are discovered in the different karst areas. He/she allocates number tags and forwards information to the Australian Speleological Federation for inclusion in the National database. He/she should have a good knowledge of STC activities and a good knowledge of the karst areas of Tasmania. Good communication and office skills are required. He/she should also be good at encouraging people to number the caves they have found as well as complete Karst Index forms.

Duties:
- Allocate numbers to new caves/karst features.
- Encourage discoverers to physically affix number tags to new caves/karst features, and to fill in Karst Index Forms.
- To maintain comprehensive records of caves and karst features in all the karst areas that STC investigates.

- To maintain records of number tags and who has them to prevent duplication, loss or missed numbers.
- Regularly forward cave and karst feature information to the Australian Speleological Federation for inclusion into their Karst Index database.

Estimated Time Required: <1 hour per month (for the current level of surface exploration).

Job Description-EQUIPMENT OFFICER

The Equipment Officer has custody of the STC equipment except when it is being used by members. He/she ensures that all equipment is accounted for and that it remains in a Safe and Serviceable condition. A strong interest and knowledge is required about caving equipment and the safety thereof. Being able to effect minor repairs is essential, as is storage space (~1 room/garage).

Duties:

- Have custody of the STC caving equipment, except when items are on loan.
- Maintain records of the where-abouts of any STC Caving Equipment.
- Make equipment readily available for use by STC members.
- Maintain an inventory of the STC equipment (an Equipment Assets List) of STC.
- At the end of the financial year give an updated Assets list to the Treasurer (for the Annual audit).
- Present a copy of the Assets List to the Annual General Meeting.
- Forward a copy of the Assets List to the Editor.
- Forward any money received for hire of equipment to the Treasurer.
- Maintain and/or arrange for the repair of equipment as necessary.
- Be responsible for the safety (i.e. retire/condemn/replace) of all equipment (i.e. encourage and co-ordinate testing of equipment and/or replacement).
- Be aware of all fixed rigging left in caves and keep records as to the date of installation and the condition of this equipment.
- Maintain Rope Logs for all STC ropes.

Estimated Time Required: 5-10 hours per month. Plus 20-25 hours for the Annual Safety Audit and Inventory.

Job Description-ARCHIVIST/ LIBRARIAN

The Archivist/Librarian has custody of the STC Library/records except when they are being used by members. He/she ensures that all materials (books, magazines, journals etc.) are accounted for and that it remains in a sound condition. A strong interest in Speleological literature is an advantage and storage space (~ 1 room) is essential.

Duties:

- Have custody of the STC Library/records, except when it is on loan.
- Maintain records of the where-abouts of any STC Library materials.
- Make the library/records readily available for use by STC members.
- Maintain an inventory of the library (a Library Assets List) of STC.
- At the end of the financial year give an updated Assets list to the Treasurer (for the Annual audit).
- Present a copy of the Assets List to the Annual General Meeting.
- Forward a copy of the Assets List to the Editor.
- Forward any money received for sale of publications to the Treasurer.

Estimated Time Required: 2 hours per month. Plus 5 hours for the Annual Inventory.

Job Description-MAP ARCHIVIST

The Map Archivist has custody of the STC Maps except when they are being used by members. He/she ensures that all Maps are accounted for and that they remain in a sound condition. A strong interest in Speleological Maps is an advantage and storage space (part of a room) is essential.

Duties:

- Have custody of the STC Maps, except when they are on loan.
- Maintain records of the where-abouts of any STC Maps.
- Make the Maps readily available for use by STC members.
- Maintain an inventory of the Map library (a Map Assets List) of STC.
- At the end of the financial year give an updated Assets list to the Treasurer (for the Annual audit).
- Present a copy of the Map Assets List to the Annual General Meeting.
- Forward any money received for sale of maps to the Treasurer.

Estimated Time Required: <1 hours per month. Plus <2 hours for the Annual Inventory.

Job Description-WEBMASTER

The Webmaster is responsible for maintaining STC's Web page (*http://www.tased.edu.au/tasonline/scaving/)* . He/she should have a strong interest in the Internet and access to a computer and the Internet are essential.

Duties:

- Maintain the STC web page, ensuring that it is 'up-to date' and 'accurate'.

Estimated Time Required: < 2 hours per month.

Job Description-LIST SERVER MANAGER

The List Server Manager is responsible for managing the STC list server. He/she should have a strong interest in the Internet and access to a computer and the Internet are essential.

Duties:

- Maintain the STC list server.
- Liaise with the Treasurer/Membership Secretary to ensure that new members are added/removed to the List server, if/as they wish.

Estimated Time Required: 1 hour per month..

Job Description-ELECTRONIC

ARCHIVIST

The Electronic Archivist is responsible for maintaining the STC html format Archive. He/she should have a strong interest in the Internet and access to a computer and the Internet are essential.

Duties:

- Regularly update the Archive as new STC publications are produced.
- Liaise with the Editor to ensure that electronic copies of all publications are procured and added to the archive.
- Encourage others to assist with updating the Archive backwards through the days of non-electronic publications (i.e. encourage others to assist with scanning and the typing-in information).
- Distribute copies of the Electronic Archive as appropriate.
- Ensure the safe storage/archival of the Electronic Archive.

Estimated Time Required: < 2 hours per month for updates. Although 5-10 hours per month could easily be spent for a couple of years updating the Archive for the 'early days' and any interested persons are encouraged to approach the Electronic Archivist to offer assistance with this task.

Job Description-GENERAL COMMITTEE PERSONS

General Committee Persons can help any members of the Committee with any of their functions. Several Committee positions have large workloads, and assistance given to these officers greatly assists them as well as gives some training to the General Committee Persons.

Duties:

- Assist members of the STC Committee or Executive in any way possible..

Estimated Time Required: 2-5 hours month could easily be spent assisting any of the STC Officers with larger workloads.

Job Description-MEMBERS

Members are the basis of the existence of STC, and also have responsibilities.

Duties: From the Constitution:

- Every applicant for membership must pay the current subscription and entrance fee (if any), at the time of his/her election to membership and undertake to observe such other matters of ethics and etiquette as may be prescribed from time to time and acknowledge that he/she has read and agrees to be bound by the Constitution, Rules and By-laws of the Organisation. Such undertakings and acknowledgements shall be in a form prescribed by the Organisation. In the case of persons under the age of eighteen years, a suitable waiver and indemnity from the parents or guardians must accompany the application.

Every member shall

- Practise Minimal Impact techniques,
- Make every effort to protect land and any property thereon used for caving.
- Give adequate consideration to safety and consider the consequences of their actions at all times.
- Whilst caving, or on the surface, any person upon experiencing any form of abnormal discomfort shall communicate immediately with other members of the Party and steps should be taken to procure first aid.
- abide by any rules, regulations or directions of the land owner or controlling authority.

How does one get a position?

Basically people are elected into the position at the Annual General Meeting, although sometimes this can happen at a General Meeting if/as the need arises (e.g. someone resigns, moves interstate etc.). Nominations for positions are called for prior to the AGM (as in this Spiel), or people can volunteer for a position. At the AGM the names of those nominated for each position are put forward, a seconder is required, as is the consent of the nominee. If more than one person has been nominated for the position a vote is taken to see who is elected to that position.

What are the Benefits of having a position?

No, this is not a joke, there are definitely benefits arising from having positions of responsibility with a recreational club. It can help you with your work, looks good on your C.V. and demonstrates that you have the right sort of personal qualities that an employer may be seeking. You will acquire new skills and knowledge. Some people revel in the "Power" or "Perks" or a position, however, in a small recreational club, Power and Perks aren't a reality (nor should they be). Instead you will receive Recognition and Appreciation for doing a job well, and a sense of Personal Satisfaction will come from this.

So I've got a position, now what do I do?

For a start you consult with the person who has done it previously to do a 'hand-over'. You can expect to receive help from the outgoing officer with your new job. They will want you to do a good job as well. The Job Descriptions above will also outline your main duties, and in due course, full details of what each position demands will appear in the slowly evolving "Members Manual".

Anyway, I hope that you all have a bit of think about which position you might like to do and that there won't be too many people avoiding the AGM, or hiding in the 'back-row'. If you still feel that you don't have the time or resources to take on a position, then please consider

..... the 5th ANNUAL STC DINNER???

It's that time of the year again....what are YOUR ideas for a date, venue, organiser??? Any ideas or volunteers???

taking on an assistant role by volunteering as a General Committee person.

See you all at the STC AGM on Wednesday November 7th.

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Peanut Brittle (JF147), Sunday 3 June, 2001 – An overdue trip report.

by Dave Rasch and Hugh Fitzgerald

Party: Tim Anderson, Damian Bidgood, Hugh Fitzgerald, Dave Rasch, Paul Newland

It was the 3rd of June, another wet and poxy Tassie day… The four STC members listed above were keen on a trip into somewhere dark. Damian wanted to take Tim into Splash Pot for ritual sacrification before he escaped the state. Dave thought a trip through Close to the Bone needed long, hard work beyond to be worthwhile, and this party seemed too inexperienced to fully satisfy that requirement. A deep trip with such a large party would leave too little time for work.

Another destination was sought. Dave came up with an idea to visit the seldom seen Peanut Brittle. Hugh was keen for a new cave, Tim just wanted to get underground, and Damian grudgingly came around to the idea of the change of venue. On the morning of the trip a fifth party member was brought into the fray. Paul, a pilot from Rotorlift Helicopters, had been coaxed along for the day by Damian and Tim. Paul had a little rope experience, mainly through rock climbing and rescue work. He had done some rope ascents on prussik cords, but had never used a mechanical ascenders before, nor done any vertical caving. However, he was keen.

Off we went to a cave unknown to most of us. Dave had been there some years before and had read some prior trip reports, thus had some idea of pitch lengths. We used a 200 metre rope which we anchored at the top of the first handline climb just inside the entrance. This was backed up by a 30m tape looped around a tree at the lip of the surface doline. The 200m rope was used to rig all drops down to Junction Hall. The vertical nature of the cave meant little rope was wasted between pitches.

After a near-unanimous vote, Tim was sent ahead to gain experience rigging a Junee vertical cave 'au naturale' (i.e. no bolts) - under Hugh's watchful and assessing eye. Apparently, Peanut Brittle was named because the rock on its walls was found to break easily. Well, maybe the earlier trips had removed all the poor rock because, at least as far as Junction Hall, the rock was found to be in good condition. Rigging the 7m-24m-10m-10m-13m pitch series turned out to be fairly straightforward and we made good speed, with handy flakes, cracks, bollards and jugs found seemingly exactly where needed. The continuous 200m rope allowed each pitch to be tied back into the preceding one with little rope wastage. Numerous deviations were used to keep the rope away from sharp edges, resulting in the rope being rigged truly 'free' of the walls, although it made descent a little more technical than if it had been rigged using "Indestructable Rope Techniques".

Paul had had no previous experience in the art of negotiating vertical cave rigging, so this trip was to be his training run. We all talked him through the techniques of crossing rebelays and deviations and on the descent he coped remarkably well. However, he was starting to show signs of trepidation at continuing beyond Junction Hall, so he sensibly decided to turn back at this point, with Tim volunteering to ascend with him to assist.

Meanwhile Damian, Hugh and Dave rigged off a prominent flake and continued via the "window route" down the next 15m and 10m pitches. At this point the cave branches, with a section about 8m long of steeply-sloping bedding plane continuing straight ahead, while a tight stream passage descends on the right to another short pitch (which doesn't appear on the survey). First, Dave used three small and very dodgy anchors to rig a rope down the pitch on the right, using Damian as extra manual security for the anchor tapes. This pitch dropped several metres to a 5m diameter wet chamber full of very loose rockfall. Dave unclipped from the rope and tentatively clambered down another 5m before deciding he had exceeded his comfort zone and re-ascended again to rejoin the others.

After de-rigging this rope, Hugh and Dave then continued down the bedding plane squeeze while Damian, having briefly attempted the squeeze, wisely chose to sit it out at this point. A runnel of water helps to lubricate the squeezy passage, which popped out vertically into a small 3m diameter chamber at the head of the next (35m?) pitch. At this point, the cave was getting decidedly dribblesome and the quality of the rock had degraded and we began to understand the reason for the naming of the cave. We could see some old rope marks embedded in some mud - which appeared to be the only thing holding a 1m diameter chockstone in place at the top of the next pitch. (We know of only one previous visit by Trevor Wailes and Nick Hume to this part of the cave). We hung a tape loop off this dodgy chockstone and backed it up spider-web-like to three extremely dodgy anchors (using a pack-haul cord, two bits of 1cm diameter coral formation and a deviation). Dave gingerly descended about 10m to a large ledge, with Hugh providing additional rope anchorage. At the ledge, the rope ran out and Dave leaned out over the pitch to view what appeared to be a further 15m(?) to a flat floor (the cave does not appear to match the survey very well at this point?). Further natural anchors are available at this ledge.

Dave and Hugh de-rigged and headed back to rejoin the rapidly-cooling Damian, making a bit of a meal of the bedding plane squeeze along the way. With his pack full, Hugh left Damian and Dave to derig the rest of the cave and chased the other two out. Unfortunately, Paul was making hard work of the ascents. His borrowed SRT rig wasn't adjusted for him and the technical rigging provided many challenges for a first-time vertical trip. Luckily most of the pitches were short, and he managed to exit the cave before getting too exhausted. Dave and Damian followed, derigging the multitude of anchors and deviations and emerged from the cave carrying the 200m+ of rope a full hour after the other three. Total time underground was 7 hours for the tailenders.

Paul drove everyone back to Hobart in his Subaru, with much car conversation to keep him from nodding off. More recent reports suggest Paul is unlikely to ever set foot in another vertical cave again! Perhaps we took the wrong approach by giving him such a memorable first caving experience? Then again, maybe after a few weeks or months he will fall victim to retrospective selective caving memory ("Oh, it wasn't that bad, really") so we might see him again. Go for it, Paul!

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Threefortyone-JF341, June 23rd, 2001.

by Joe Farrell

This trip was part of the Mid-Winter Extravaganza weekend (see Speleo-Spiel 325, page 7) and was my second with STC. It was a good intro. to the more taxing nature of the Junee Caves. We'd had coffees and chats at Maydena and were en route to cave by 10 a.m. with an all bloke party of Dave Rasch, Jol Desmarchelier, Chris Sharples, Steve Phipps and myself.

Threefortyone was found in the 70's by TCC and/or NUCC and has had various stages of 'enlargement', with the 'TCC Extension', then the Jeff Butt/Rolan Eberhard "Enterprise Extension", and the Dave Rasch/Jeff Butt extension "Into the Dinosaur" which led to Threefortyone being connected to Rift Cave (JF34) giving a system about 10 km long. Dave, Jeff and others surveyed most of this system over something like 33 trips. During this 'campaign', they did some track marking and signing to prevent unnecessary damage by careless cavers.

Threefortyone (like most caves in the Junee I'm discovering) is not a doddle like many Mole Creek caves. Being fit is a prerequisite. Even in the horizontal bits there are some tricky climbing manoeuvres and the entrance series is steep. You need to climb and abseil down a muddied narrow passage on flowstone and a trickle of water. At the bottom the trickle goes down your neck as you abseil the ensuing 39m freehang. The formation gets impressive as you descend, the last 20m you're hanging next to flowstone. A 5 m column formation is present at touchdown too. From there it's horizontal and the formation appears sporadically.

Highlights of the rest of the trip for me were a false flowstone floor ("The Dinosaurs Jaw") protruding 6 metres from the wall and hanging about 8m off the floor (you'd be dumb to walk across it); the series of voluminous chambers - higher than wide; and making a patch of white flow stone floor fluoresce with a camera flash! - super cool, never seen it done before.

We squeezed out the entrance into the dark after about 5 or 6 hours underground. I think and we saw maybe a tenth of the cave! A 40 minute night-walk back to the cars through the rainforest ensured I was thoroughly buggered for the long drive back to Hobart. Would have liked to have stayed for Sunday caving but funds were tight.

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Valley Entrance-Exit Efflux Through Trip-23rd September, 2001.

by Heather Nichols

Party: Hugh Fitzgerald, Jeff Butt, Dave Rasch, Joe Farrell, Heather Nichols.

Exit Cave was to be my third trip. In looking forward to the cave I had forgotten that any walk of length was going to include some hills. I was led to a mountain (O.K. - a very big hill) and up we went. We left the car park at about 11 a.m., arriving at the entrance at 12:45. After some lunch, in we almost went. Unfortunately the lock was grunged up. Dave's adaptation of his belt buckle into a key lever saved the day, in we now were. [*We took the lock with us to return to Parks for repair/replacement. For any trip to a gated cave, it would be worthwhile taking a can of lubricant (CRC/powdered graphite etc.) and a pair of pliers/multi-grips, just in case the lock needs some persuasion to open. Ed.*]

Exit is too immense for me to have kept everything in order in my mind. We went through some squeezy bits, a few little climbs and down a rope ladder (I've yet to learn the art of not turning circles while on the ladder!). We walked on through some easier passages, with side trips to an Aven and crawled up a passage which ended halfway up another. We also went up the Eastern Grand Fissure where Joe's obvious rapture added another delight. Exit is full of variations, from tiny little squeezy bits to huge chambers, it even comes with a beach! There seemed innumerable rock piles, and just as many upright walks. Listening to Jeff introduce Joe around, pointing out the passages to other parts of the system only enhanced the awe I felt. It is also an excellent leveller - just when you're patting yourself on the back for getting through what looked liked a hard bit more easily than expected, an easy looking bit takes far more work than it should.

Sometime during the wanderings I felt the need for a few extra 'scenic moments', not because I was gasping for breath, but because I really wanted to shine my light into those corners I'd have missed if I'd kept walking. An added benefit from these moments was that Hugh (whose birthday trip this was) could grab a catnap until I had again caught up. It seemed that in a very short time we had arrived at the glow worms. After a rest in their gentle company our exit of Exit was at hand. We emerged at appox. 6:45 p.m. and started for the car at about 7 p.m.

Just a nice gentle walk up another rotten mountain! With Hugh Fleetfoot leading us unerringly along Skinners Track I had quite a few more scenic moments to enjoy the forest in the dark. Halfway up this hill it became evident that I was drawing on my last reserves (or so it felt) but with Daves' calm encouragement, to the top we went. Once again on the flat, nothing seemed nearly as hard as it just was and it was time for reliving in bright colour the mental videos that will always stay. It took just under two hours to return to the car, so we had done the trip within Hugh's time plan, the outer edges I admit, but under 10 hours. To quote Joe it 'was an epic day', with great company and great scenery. This particular novice truly appreciates the time taken by you experienced (and fit) cavers who are willing to baby-sit the beginners. Thanks.

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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.

The P-hanger bolting Project-an Update-25/8/2001

by Jeff Butt

Good things do take time!

You may recall that we have been talking of re-bolting Midnight Hole for some time. We had an initial play with some hardware in 1999, as reported in Speleo Spiels 311 (page 3), and 312 (page 3). Then last year (see Speleo Spiel 321, pages 13-15) we installed a series of seven Test bolts in the X-Benders Quarry.

The next stage of this project was to 'prove' these bolts. It should be noted that these bolts and the 'glue' have already been well and truly 'proven'; they are the 'standard' in the UK. But what we wanted to do was to formally 'prove; our own 'installer ability' by qualitatively testing the strengths of the test bolts we installed.

Obtaining access to a suitable test rig proved to be impossible so once again the project 'stalled'.

However over the previous few weeks with some renewed enthusiasm towards the project I managed to track down a suitable test rig (a Hilti 4 Tester, a small hydraulic test rig that tests up to 16 kN, worth ~$2K) that had just been acquired by The Otis Elevator Company here in Hobart. Otis use this rig to prove bolts used to secure safety lines in elevator shafts; they test their bolts to 5 kN tension (i.e. will hold a mass of 500 kg; 1 kN is the force exerted by gravity on a mass of 100 kg) ; and if they pass are regarded as 'proven'. Good fortune had it that the new owner of this rig agreed to loan this brand new instrument to me free of charge.

The Hilti Tester 4 in action.

With this major obstacle overcome, and along with my improving mobility after my recent surgery we were once again ready to get things rolling again. A field trip was planned for Saturday August 25th. A practise trial run occurred at home on August 24th, this proved to be quite useful and meant that the field trip on the 25th was successful.

August 24th Trial Run:

A preliminary test of the Test Rig at home let me discover a major limitation of this device. The 'as supplied' hook (made from 12 mm diameter rod) began to permanently deform (i.e. 'open up') at about 12 kN. After banging the hook back into shape with a hammer and vice I decided to drill a couple of holes in the hook so that a piece of fencing wire could be used to close up the open side of the hook, i.e. effectively adding a 'gate' to this un-gated 'karabiner'. This allowed the rig to test up to about 14.5 kN, at which stage the wire would break, still that's pretty close to the 16 kN limit, so wasn't too bad. Clearly the design of the test rig is somewhat flawed with a hook that can only handle ~75% of the test rigs rated maximum force! Replacing the hook with a small shackle would fix the problem.

I also found that a level surface for the feet of the test rig was required; a solid piece of hardwood did the job, but a piece of steel plate would be superior.

Anyway, it was fortunate that I tested the rig prior to 'using it in anger', as by discovering the problems at home I could more easily fix them.

Hi Ho, Hi Ho, it's a bolt testing we shall go.

August 25th Field trip:

Participants: Hans Benisch, Arthur Clarke, Joe Farrell, Jeff Butt

There were two aims for the day, including:

- to test the seven 'one year old' test bolts to a reasonable level (14.5 kN was the limit of our test-rig) and to record their performance.
- to do a Midnight Hole pull-through trip to discuss the installation sites for the bolts at each pitch-head (catering for both pull-through and SRT trips).

Here's a summary of what went on in relation to each of these aims.

Compared to the 'Bolt installing' trip of 12/8/2000 we were very lightly loaded today; we probably had more weight in the photographic gear than the bolt testing gear as we headed up to the 'test benches'.

We easily relocated the bolts, which had been out in the weather for just over a year; the stainless steel had weathered to a light bronze colour. The glue remained the same pink colour, and the 'smudge' of pink was useful for relocating the bolts. (For sensitive in-cave installing, drill dust can be rubbed into the drying glue to

Joe 'testing' an un-grouted P-hanger in a half-drilled hole.

hide the pink colour.)

BOLT TESTING

At the quarry, the flatness of the rock around most of the bolts was good enough to dispense with the wooden 'leveller'.

Arthur with his trusty digital camera was called upon to take 'before', 'during' and 'after' photographs of each of the bolts.

So as not to waste the field trip, we decided to be conservative in our testing to begin with, only testing the bolts up to 10 kN. After the first 4 bolts were done, we decided to test to as high as we could with the test rig; which was about 14-14.5 kN at which point our wire 'gate' would fail.

During testing of the bolts we commonly observed that as the load approached 10 kN, the lower portion of the eye of the hanger started to deform (elastically), pulling the surface glue outwards fractions of a millimetre from the rock; sometimes with small rock fragments attached.

As the tension increased the flexing of the eye's increased, making the cracks increase to about one millimetre. At around 14-14.5 kN the wire 'gate' would break, releasing the load on the bolt.

When the load was released the hanger relaxed back to near its' original position and the surface cracks mostly closed up.

In the UK, testing of the bolts found that permanent deformation of the eye occurred at about 19 kN. Ultimate failure of their test bolts generally required a force in the 29-54 kN range.

One way of rating the strengths of bolts (or climbing gear in general) is to test a batch of samples to destruction and to do some statistics on the forces required to achieve this. Using the mean and standard-deviation one can compute the lower 3-sigma limit; this represents the force that 99.87% of the population will exceed. Ideally this 3-sigma limit should be ~20 kN or more.

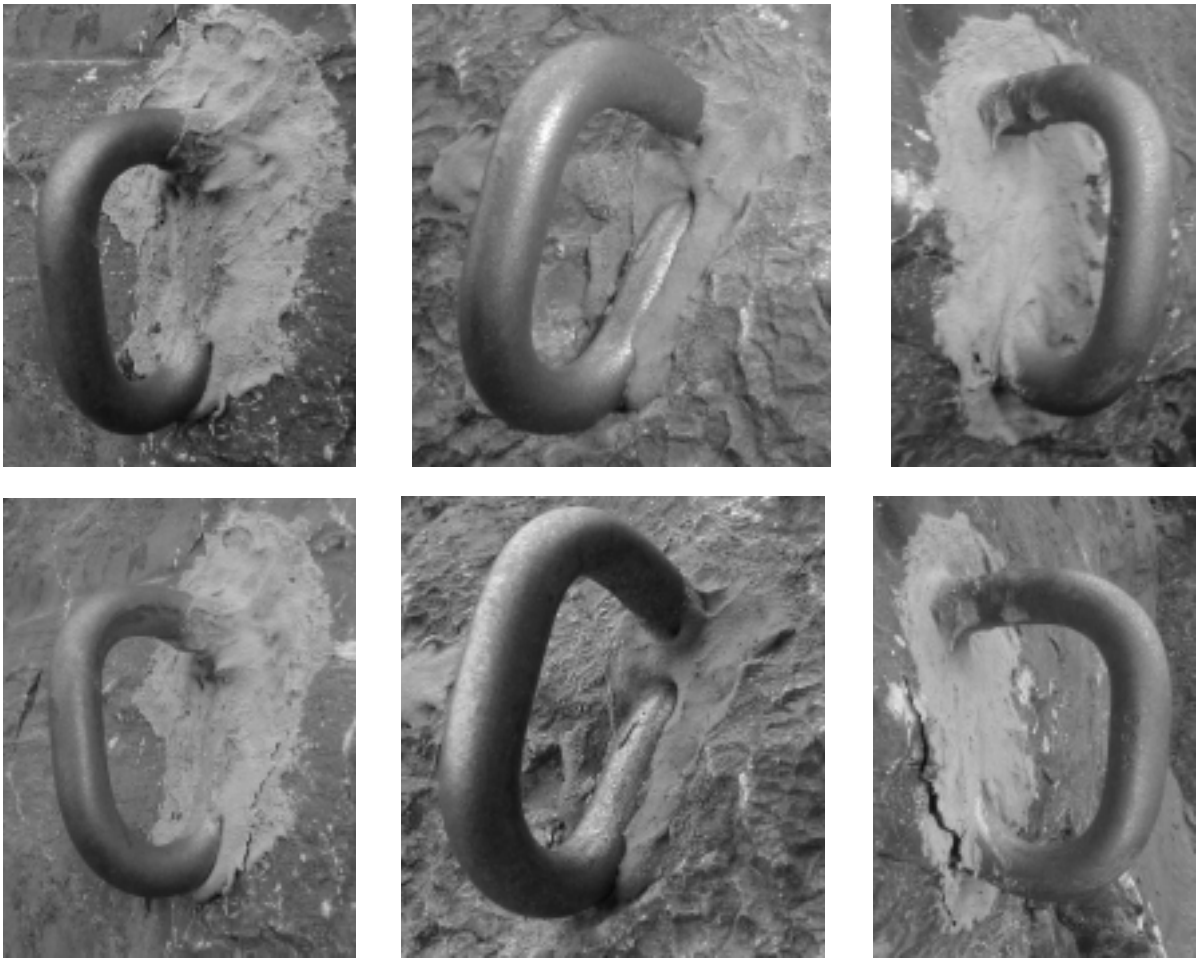
Bolt 5 under test with 14 kN force applied. Note that the lower part of the eye has flexed away from the rock. Note also the 'wire gate' used to strengthen the 'testers hook'.

It would have been good to test our bolts to failure to compare with these figures, but this was not possible with our test rig.

However, this does mean that our test bolts are still intact, and they can be tested again in the future; ideally with a larger capacity test rig. It will be interesting to see how they age; if anything these bolts out in the elements should 'age' faster than any bolts installed underground.

A summary of the Bolt testing is shown in the table below.

Bolt No.	Location	Installed on 12/8/00 by	Installation comments	Tested on 25/8/01 Test comments
1	Quarry-wall of lower bench, left of corner.	Jeff Butt	Hole brushed and blown clean. Insufficient glue on first take, bolt removed and extra glue added.	Tested to 10 kN. Cracks to 1.5 mm around lower part of eye, mostly closed when tension released.
2	Quarry-floor of lower bench, left of corner.	Ian Houshold	Hole filled with water prior to glueing.	Tested to 10 kN. Minuscule cracks around glue-rock boundary.
3	Quarry-in large boulder near corner wall.	Dave Rasch	Hole brushed and blown clean.	Tested to 10 kN. Hanger bending outward from bottom of eye, settled back when load released.
4	Quarry-wall of lower bench, right of corner.	Hans Benisch	Hole washed out with water.	Tested to 10 kN. Again some reversible lifting of lower part of eye.
5	Quarry-wall of upper bench, right of corner.	Dave Rasch	Hole brushed and blown clean.	Tested to 14.5 kN. Again eye deforms under load; the lifting glue stayed attached to the hanger, removing small slivers of surface rock adhered to it.
6	Quarry-wall of upper bench, left of corner.	Jeff Butt	Hole brushed and blown clean.	Tested to 14.5 kN. Cracking up to 1 mm wide around lower part of eye when hanger under load.
7	Quarry-in boulder near lip of upper bench floor, left of corner.	Ian Houshold	Hole brushed and blown clean.	Tested to 14 kN. Remained intact. Again some reversible lifting of lower part of eye.
Other Comments		The limestone in the 'test benches' is highly siliceous; it was damn hard to drill the holes into! The high quality of the rock means that in our tests we were testing the glue/bolt and glue/rock bonds rather than the quality of the surrounding rock.		



Before (upper row) and After (lower row) photographs of Bolts 1 (left panels), 3 (middle panels) and 6 (right panels). Note that in each of the After photographs the lower portion of the eye has flexed outwards. For Bolts 1 and 6, where there has been more surface grouting, one can see a crack between the glue and rock.

Testing of the bolts was significantly faster than drilling the holes! All up the testing of the 7 bolts took about 2 hours.

We 'proved' all the bolts to 10 kN, and three to ~14 kN, thus we believe that our installing abilities are 'up to scratch'. Note that these 'proving' forces are in Tension, the applied force tries to pull the bolt straight out of the rock. In normal use the bolts are loaded in Shear, the bolts are much stronger when loaded this way.

We now believe that we are ready to start installing these bolts underground, with Midnight Hole being the first cave to warrant our attentions.

Arthur cranking up the test rig.

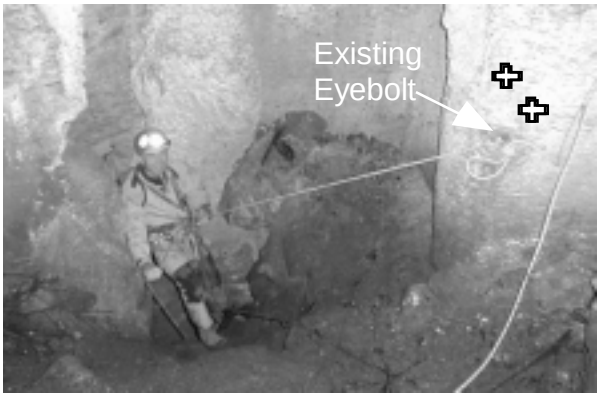
In the UK there are some formal procedures for the P-hanger bolting program; I feel we should learn from this and adapt it to create our own Protocols for training of installers; the installation of bolts and the inspection/maintenance and reporting of installed bolts.

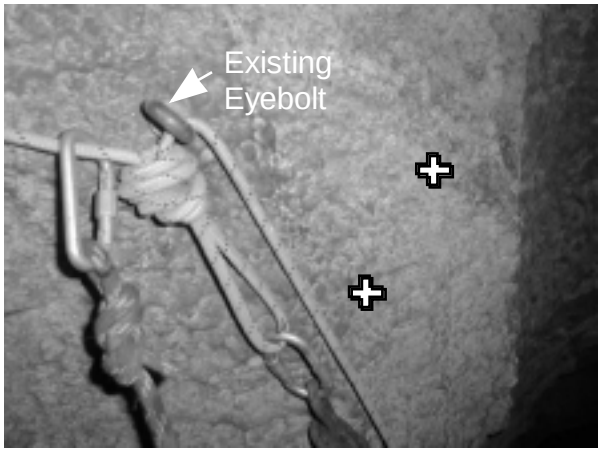
It is worth noting that the portable bolt test rig is of such a size that it could easily be taken underground to test bolts in-situ. Perhaps this would be a good protocol for the long-term management of the bolts, e.g. apart form an annual visual inspection each 2-3 years the bolts could be tested to some predetermined 'proving force' (e.g. 5 kN) to qualitatively assess the integrity of the bolts. However, I suspect that we may find that this level of testing is unnecessary.

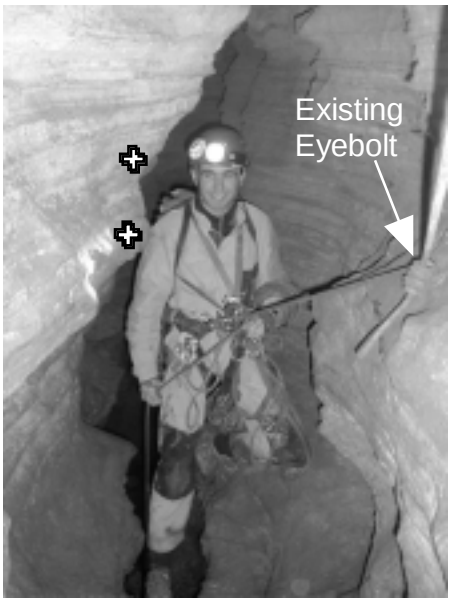
Anyway, on to the Midnight Hole through trip.

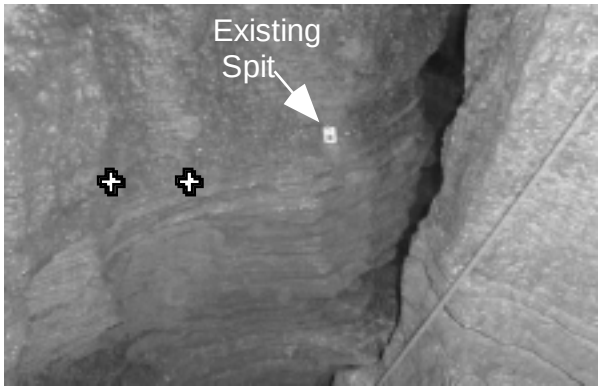
MIDNIGHT HOLE THROUGH TRIP

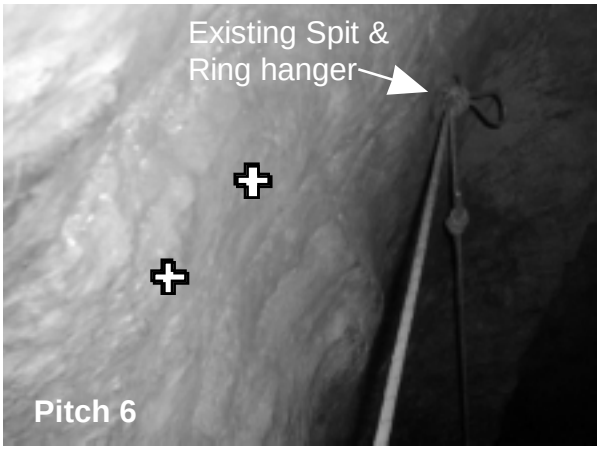
The aim of this trip was to locate the best sites for the new P-hangers. Arthur took photographs of all the pitch-heads, including the proposed sites for the new bolts. The existing bolts and the proposed new bolts are listed in the table below. All up 12 P-hangers are proposed to make the cave 'pull-through' friendly. To make the cave SRT friendly, an additional 6 P-hangers would be needed (4 to replace existing spits, 2 to replace the use of 'dodgy' naturals). It is worth noting that if the new bolts are placed high, then they will also be more suitable for rescue situations.







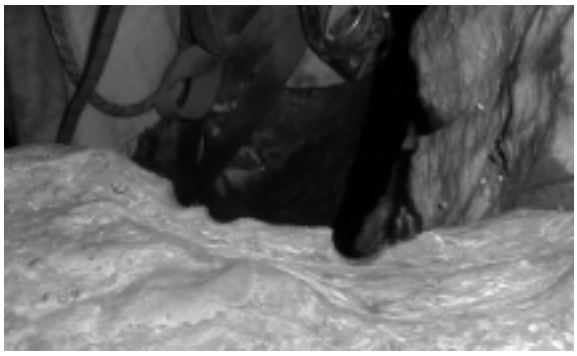




Pitch-heads (shown looking into the cave) in Midnight Hole showing the proposed sites (white crosses) for new P-hangers.

Pitch	Existing Bolts	Proposed New Bolts and comments.
Entrance Pitch (21 m)	None, the rope is rigged from fallen bough near the entrance.	Two on right hand wall, will make rope retrieval easier and also be suitable for SRT. For SRT trips sometimes a deviation about 6 m down from a natural anchor is used.
Pitch 2 (11 m)	Eyebolt on right hand wall, back from pitch.	Two on right hand wall above existing eyebolt. For SRT trips a deviation from a natural is needed on the left hand wall above the shaft.
Pitch 3 (39 m)	Eyebolt on left hand wall. Bad spit on left hand wall 2 m out in rift. Two spits, one on left wall, one on right wall 5 m out in rift, these give a Y-hang for SRT.	Two on the right hand wall near the existing eyebolt. Remove the bad spit 2 m out. Leave the two SRT spits for the moment.

Pitch 4 (8 m)	Eyebolt on right hand wall.	Two on the left hand wall, roughly opposite the existing eyebolt, but at head height.
Pitch 5 (34 m)	Eyebolt on right hand wall; this has been extensively worn by pull-throughs, see the photograph below. Also, there are significant rope grooves in the limestone beneath this bolt, again see photographs below. Spit on left hand wall. (Used for SRT)	Two on the left hand wall at the lip, this will prevent rope rubbing on the limestone. Leave the SRT spit there for the moment. For SRT trips a rebelay is needed about 20 m down; there are marginal naturals in this area.
Pitch 6 (49 m)	Eyebolt on right hand wall with a mess of attached chain, maillons and rusty krab, see photograph. Also, there are two deep grooves in the limestone immediately beneath the eyebolt, see photograph. These grooves can make rope retrieval difficult. Spit on left hand wall. (Used for SRT)	Two on the left hand wall, this will prevent the rope from touching the limestone and avoid rope retrieval problems which have commonly occurred here. Leave the SRT spit there for the moment, but remove the rusting ring hanger.
Other Comments	In the future 6 more bolts, as detailed below could be placed to facilitate SRT trips. • The 4 remaining SRT spits could be replaced with P-hangers. • The deviation on the second pitch could be fitted with a P-hanger. • On Pitch 5 a P-hanger could be installed in a large limestone boss at about -22 m for a rebelay.	



Pitch 5-Rope wear grooves below the Eyebolt.

Pitch 5-Rope Wear grooves run for about 2 m below the bolt.

Pitch 5-Eyebolt showing the wear from rope pull-throughs.

Pitch 6-a 'rats nest' of rigging tat attached to the Eyebolt. Note the deep grooves in the limestone below the bolt.

Overview.

We 'proved' our test bolts to a reasonable standard and discussed the best locations of bolts for Midnight Hole; achieving the aims set out for the day.

The next steps with this project are:

- report our test results to Parks, Wildlife and Heritage,
- decide on bolt-placements for Midnight Hole,
- to rebolt Midnight Hole, and to remove/rehabilitate the ageing bolts/holes that exists in Midnight Hole. Along those lines it would be quite interesting to test some of the existing bolts prior to their removal.
- as our test bolts remain, we can test/monitor these too on an on-going basis if we so wish. If we can source a higher capacity test rig, then it would be good to test our bolts to destruction and to calculate some statistics on the strengths.

So, now without any hurdles, we should be in a position to get the Midnight Hole job done this year. Once that is done, some thought should be given to a rebolting priority list for other popular caves at Ida Bay and in the Junee-Florentine.

Acknowledgements:

Many thanks to The Otis Elevator Company for their assistance with this project.

All photographs taken by Arthur Clarke and his trusty digital camera.

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Slaughterhouse Pot-SRT'ing: September 2nd, 2001.

by Jeff Butt

Party: Joe Farrell, Julianne Campbell, Geoff Wise, Alan Jackson, Jeff Butt.

This was to be a pleasant through trip, but it ended up being a bit of a gruelling day. Firstly, as we drove up the Florentine Road there was about a foot of snow in the gutters, left over from over a week ago, and the slopes of Mt. Field West were well covered with snow. Driving up the Eight Road was painful due to the large number of downed trees/bushes, caused by the weight of the now gone snow; it took us about an hour to travel the 2 km. We made it to about 200 m from the end of the road, where a larger diameter tree stopped us. So much for all the good track-work and roadside pruning done over the mid-winters weekend! So, then off to Growling we went, again lots of downers. A bow-saw trip is needed to clear the track. [It would be advisable to take some cutting implements on any trips up in the valley, as other roads/tracks will also have been affected.]

Not unexpectedly, the Growling Stream was raging away, swelled with snow-melt. I suspected that the through trip was out of the question, as despite very little recent rain the melt had been on for days. For some adrenaline invoking fun we headed into Growling for a look at the ferocious white water. Crossing the stream above the gauging rock was exhilarating. We cruised down the dry bypass to the final climb; that would have been totally soaking, so we retreated to the sunshine for lunch.

After lunch we headed up to Slaughterhouse Pot for a down/up trip. We had 'fresh' ropes to sway the in-situ ropes, which have been in place since November 1999. I had also planned to pull out the defunct phone line, but it was gone, so someone has recently done this. [*Checking with the Police found that they had removed it a few months back.*] We cruised down with the assistance of gravity and soon enough were in Slaughterhouse Aven. Joe, Julianne and myself went to see if Growling was sumped out, it was indeed. There was evidence that water levels had recently been above the base of the lower ladder between Windy Rift and Slaughterhouse aven.

Our ascent with a party of five was not fast. Route finding up through the rockfall was more difficult without the phone line, but was still OK. Route finding the way down seems to be much easier! As we ascended the pitches we replaced the ropes with the fresh ones. For future reference the correct rope lengths for rigging the three pitches are: pitch 1-30 m, pitch 2-20 m and pitch 3-20 m.

Exiting the Slaughterhouse entrance series with bulging (lots of stiff 11 mm Bluewater rope!) packs brought back memories of Splash Pot.....these memories were further reinforced with my aching muscles the day after!

Two of the three ropes recovered from the cave had damage spots in them, so it was timely to remove these ropes (which have been in the cave since November 1999). The fresh rope on pitch 1 is 9 mm, as we did not have a suitable 11 mm rope in the store. As soon as one becomes available this should be used to replace the 9 mm rope. If you are planning a trip to Slaughterhouse Pot, then please see me for a replacement rope for this pitch before you go.

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Back to good old Threefortyone (JF341): 15/9/2001.

by Jeff Butt

Party: Andras Galambos, Jeff Butt.

The aim of the day was to do a little tidying-up surveying in 'old 341', as well as derig the cave. Due to recent snow-damage in the valley, we anticipated doing a little road/track clearing as well, so came equipped with axe and bow-saw.

The new Junee Quarry Road gate (at the site of the old gate) was negotiated with the key, which I had remembered to bring, and we were pleasantly surprised to the roads clear all the way to the Chairman track carpark. The walking track, however wasn't quite in the same state; there were many downers over it. It took us about an hour to clear most of the downers; we slightly re-routed the track around a couple of large tree-falls.

I hadn't been to Threefortyone for some years, but with about thirty-odd trips down this hole under my belt, every rock and manoeuvre was firmly in my memory. The new bolt on the long pitch is great and gives an added measure of safety. We left our SRT gear at the base of the pitch, and headed down to the first large chamber, the crystal pool was overflowing with water. We left the bulk of our gear nearby and headed off with survey gear via the flattener route to the 'hole in the ceiling'. From this point we surveyed our way back to where we had started via the 'boneyard' maze. There were quite a few leads and side-passages in this area; we investigated all but one which requires some gear (a 10 m rope or ladder would suffice). We also surveyed into the area to the left of the flattener route; this leads one into a steeply ascending passage containing a major rockfall. Many of the rocks are car to 1/3rd Bus sized, with many precariously placed and the passage averages about 8 m wide. We baulked at a dodgy, exposed climb, but can see that the passage continues for at least 20 m upwards. What makes this area particularly interesting is that the sides of the passage contain the massive 'roof droops' (solution pendants) that indicate we are in some of the ancient major cave that makes up a large proportion of Threefortyone. There are a couple of interesting leads remaining in this area.

At this stage in the day we had spent about 5 hours surveying and decided to head home, leaving the cave rigged for another trip. I wouldn't be surprised if old 341 reveals some further secrets! We emerged to fading daylight six and a half hours after heading in the cave. It was a pleasant trip and indicated to me that my caving fitness and mobility underground is steadily improving. We added ~240 m to the surveyed length of the cave today.

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Rope Testing Working Bee-Two Takes: 19/8/2001 & 27/9/2001 and some Observations on the Longevity of our caving ropes.

by Jeff Butt

Take 1-19/8: Hans Benisch, Liz Canning, Hugh Fitzgerald, Joe Farrell, Jeff Butt.
Take 2-27/9: Dave Rasch, Joe Farrell, Jeff Butt.

As part of maintaining the gear store I aim to have a Rope Testing session each year in order to weed out ropes that are not capable of withstanding at least two consecutive fall factor-1 falls with an 80 kg mass (this is currently the minimum requirement for any STC rope). Individuals are also invited to bring samples of personal ropes for a test as well. As has become part of the STC tradition a Devonshire tea is used to reward the hungry helpers. The testing session was planned for Aug 19th.

Take 1-Aug. 19th: Due to rather inclement weather only Scones (no ropes) were tested. Apparently there were no dud scones, as they all went. As, for finding any dud ropes, well that would wait until the Springtime. But for a 'no-fail' Scone recipe, I recommend the following. You may note the similarity of this recipe to that for the recipe for Drop Testing Ropes!

Drop Testing Scones:

Ingredients:
250 g S.R. flour
1 teaspoons baking powder
1.5 tablespoons butter
3 tablespoons sugar
150 ml milk

Method:
Drop the butter and sugar into a mixing bowl and rub in the butter.
Mix in the sugar, then the flour and baking powder.
Knead the mixture lightly, roll on a floured board to 2.5 cm thick and cut into individual scones.
Bake towards the top of the oven at ~200°C for about 10-12 minutes.
Serve with a selection of jams, butter, cream.
To ensure an adequate replacement of 'testers energy' consider that this quantity will only feed 4 hungry testers...so scale up the quantities accordingly!

Drop Testing Ropes:

Ingredients:
250 cm rope
1 bucket of water
1 drop test rig
3 helpers, more are better!

Method:
Drop the rope into the bucket of water the day before the test, wet ropes are weaker!
Tie figure Eight knots in each end of the rope, this makes the rope sample about 1 m long.
Attach the rope to the drop test rig anchor.
Haul the 80 kg weight about 200 cm skyward, a 3:1 or 6:1 mechanical advantage system helps, but if you have enough maniacal helpers then you can dispense with pulley systems and just use 'grunt' power.
Suspend the weight from the end of the rope (at the same height as the anchor) from a stringette.
Carefully cut the stringette, sending the weight earthwards.
If the rope survives, then do the haul drop again; each cycle takes about 10-12 minutes.
If the rope survives three falls then it has passed with flying colours.
Cut the rope down, there are many more to test.

Take 2-Sep. 27th: This impromptu mid-week 'drop of a rope' session was organised at the 'drop of a hat'. Samples from seven STC ropes (mainly 9 mm diameter) were tested with 21 drops. Using a 6:1 pulley system we completed the job in a few hours. Each rope sample, if it survived was given 3 drops. The survival of a third drop indicates that the rope has some 'reserve capacity' and should still be able to meet the minimum standard (i.e. hold two consecutive 80 kg Fall-factor 1 falls) for the next 12 months. Those without any 'reserve' (i.e. only holding 2 falls) need to be assessed on an individual basis. Those ropes holding only 1 fall, but breaking on the second are discarded, as are any ropes that break on the first fall (with our regular maintenance and safety assessments, it is unlikely that we will have any ropes in this category!!). A summary of our results is in the table below.

Summary of testing results for 27/9/01	No. of samples	No. samples that held the Number of 80 kg Fall Factor 1 falls		
Rope Diameter		**1**	**2**	**3+**
9 mm	6	1	3	2
10 mm	1			1
Totals	7	1	3	3

Three of the ropes passed with reserve capacity; another three passed, but have no reserve capacity. One rope failed on the second fall, this has been retired. Sibling ropes (i.e. originating from the same 200 m parent roll of rope) to the tested ropes have also carefully assessed.

It is noteworthy that the 9 mm rope that failed was of 1995 vintage, and has seen considerable use. Some older 9 mm ropes that have seen less use performed much better.

Some Observations on the Longevity of our Caving Ropes:

From my experience with drop testing ropes and maintaining rope log-books over the last four years it seems that the different diameter ropes have the following 'life-times'.

Diameter	Lifetime[#] (years)	Lifetime[#] (number of uses[*])
9 mm	7-9	~250-350
10 mm	12-15	~400-?
11 mm	20-25	? (not enough data)

'Lifetime' is defined as the period of time that a rope is capable of withstanding two consecutive 80 kg fall-factor 1 falls. The lifetime occurs when either the elapsed time or the number of uses occurs first.

* the number of 'uses' is the total number of caver ascents and descents.

STC Static Rope lengths, by diameter and age, 27/9/2001.

{The number in brackets is the number of fall-factor 1 falls the rope last withstood on the last test. "nt" indicates the rope hasn't been tested}.

Year Diam. (Total)	2001-1998	1997-1994	1993-1990	1989-1986	1985-1982
9 mm (422)		115 {>7} 38 {nt} 30 {>4} 26 {>3} 16 {>4} 14 {>4} 7 by 2 {>3, >4}	54 {2} 49 {2} 23 by 2 {nt, nt} 20 {2}		
10 mm (340)	120 {nt} 80 {nt}	13 {>3} 11 {>10} 6 by 2 {>10}		16 {>3} 15 {>5} 14 {>3} 13 {>3} 12 {5} 9 by 2 {>4, nt} 8 by 2 {>3, nt}	
11 mm (311)			70 {nt} 45 {nt} 39 {nt} 23 {>15} 22 {nt} 17 {>15}		23 {>3} 21 {>10} 20 {>10} 13 {>7} 12 {>3} 6 {>3}
Total (1073)	**200 m**	**289 m**	**385 m**	**104 m**	**95 m**

Of course many ropes age prematurely due to damage, or improper use/storage and this table should not be taken as 'gospel'! If you have any doubt about your ropes, or can't drop test samples taken from the most worn parts of them, then you should replace your ropes. Indeed, manufacturers these days state that the life of a rope is something like 5 years. I believe that this is a 'cover your backside' approach, and is likely to be the 'worst case' scenario. The sceptical may think, maybe manufacturers may now using inferior/cheaper materials in their ropes, and thus modern ropes don't last as long as ropes made some years ago. It would be interesting to discover if there is any substance in this thought.

Provided manufacturers haven't taken short-cuts, then with good care your Static ropes should last longer than 5 years; but also, with abuse (e.g. towing a car) they may not even last one use! Whilst it might be nice to carry 9 mm ropes, they simply don't have the lasting power. It is for this reason that the 200 m roll of rope we have just purchased is of 10 mm diameter; this size rope is a compromise between the lightness of 9 mm and the strength and durability of 11 mm ropes.

It is interesting to note that many of our 11 mm Bluewater ropes have been retired due to excessive stiffness (which when dry makes them practically unknottable; they do soften when wet), even though they are still adequate in respect of holding two consecutive 80 kg fall-factor 1 falls. Other ropes have been retired due to general wear and tear on the sheath, i.e. 'rattiness'. and/or damage due to abrasion etc.

A table of the STC serviceable Static ropes is shown above. Ropes in the shaded squares in the table are those which are nearing the end of their useful lives and are likely to be retired over the next twelve months or so. It is instructive to look at the number of drops tests the ropes last held, one can see that 9 mm ropes age significantly faster than the thicker ropes.

I'm pleased that we have purchased some new rope this year. If we purchase about 200 m of rope each 2 years, then we will maintain a good supply of useful and safe ropes. At this rate of turnover we should maintain a total of ~700 m of rope at any one time.

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Midnight Hole Rebolting Trip-Take 1: 26th September, 2001.

by Joe Farrell and Jeff Butt

After approval from Parks to go ahead with the rebolting of Midnight Hole, we were keen to make a start. On the drill team were Dave Rasch, Jol Desmarchelier, Jeff Butt and Joe Farrell.

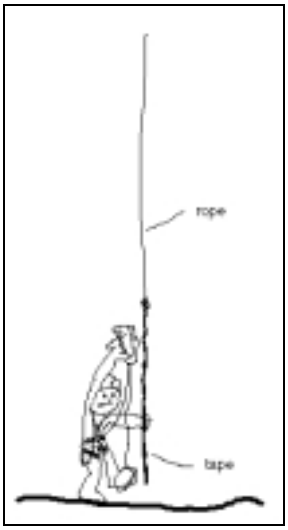
We left the Mystery Creek car park at 10:45 a.m. and lugged copious amounts of batteries (learning from the Benders Quarry drilling session, where batteries were the main problem), rope and associated paraphernalia up the hill through the forest. It was good having four people as we each had a good load.

The plan was to drill the holes on the way down; we brought ropes for the first five pitches so that we could access the six pitch-heads. Then if time allowed we would glue on the way up. All up we hoped to get the dozen new bolts in, two per pitch-head, as illustrated on page 15 in this Spiel.

Anyway Dave commenced drilling and the first hole (at the entrance pitch) which went reasonably well till the drill cut out; we presumed it was a thermal overload. Anyway we let the drill rest/cool and then it worked fine the first hole was successfully done. We lunched to let the drill cool again and then Jeff got the second hole done without any interruptions, but the drill was noticeably warm.

At this stage it became apparent that our plans for the day were rather optimistic...the STC drill isn't really up to the task of drilling P-hanger holes one after the other.

So down the first pitch we went and commenced on hole number three. This time there was a more serious overheating problem and a cooling rest did not let the drill



recover! [*On pulling the drill apart at home, it was found that some of the wiring had been damaged when Jeff did some drill maintenance after it failed on the Styx Valley trip, the wires were pinched between some plastic lugs. When the drill was working hard, the current had caused the insulation on these 'pressed together' wires to melt and create a short circuit...end of story! The wires were easily repaired, so the STC drill still lives. However, it's just not up to drilling more than one P-hanger hole per hour! We need to procure a reliable drill that is up to the task...*] So, as not to totally waste the day, Jeff and Joe headed down the cave to rig it for SRT; to make it faster for the next drilling/glueing trip. Rope lengths were overly fine tuned...so there was an interesting manoeuvre to get back onto the pitch 3 rope for the ascent... one had to man-handle a couple of metres of tape to stretch the rope down to ascender reach.

Meanwhile Jol and Dave went surface trogging and found a new entrance. Dave gathered some useful GPS fixes on some untagged holes using his new toy, a Garmin eTrex GPS unit. Jol scared himself by jumping into a benign looking depression, slipping, and ending up straddling a log suspended over a black hole. The longest anyone was underground was 3 and 3/4 hours. We left the cave rigged, scraped together the remaining gear and arrived back at the car by 4:30 p.m.

Looks like we still have a few 'bugs' to sort out with this drilling caper...but we'll get there.

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Midnight Hole Rebolting Trip-Take 2: 29th September, 2001.

by Jeff Butt

Party: Andras Galambos, Steve Bunton, Jeff Butt.

Learning from our previous trip on 26/9, for this trip we came equipped with a heftier drill, the Police SAR 24 Volt Ramset Hammer drill plus a separate 7 AmpHr 24 Volt battery pack (two 12 V gell cells in series).

The day was very warm and windy, and when we arrived at Midnight Hole the ground was heaving adjacent to the entrance! The large tree some 2 m from the entrance was blowing wildly in the wind and the root system on the side away from Midnight Hole had less than it's normal grip on the ground; the rocks/earth in that vicinity were oscillating by about 20 cm. So, we thought it wise to move a little further from the entrance before trogging up. We also wondered what would happen if the tree fell over the entrance....would a cascade of rocks and earth be released down the first pitch?, would the tree cover the entrance?, would the tree fall and knock down our anchor tree? We decided that since we were to be working further down the cave, then we were reasonably safe from a cascade of debri; if the tree fell over the entrance, we had enough rope to derig from the 2nd pitch and do a 'pull-through'; and we added another anchor in, lest the anchor tree get knocked down.

So, off we headed down the cave to the head of the second pitch where we had half a hole drilled. The drill, on it's normal battery pack powered though the 1.5 holes needed here, and so on we headed to the third pitch. We spent some time discussing the merits of where the bolts would best be, and in the end decided that the left hand wall (as per the picture on page 15 of this Spiel) was best. Here the drill battery ran out after half a hole (i.e. it lasted 2 holes), so we moved on to the 7 AmpHr battery pack, which allowed us to make short work of finishing off this pitch.

Likewise, the two holes at the top of the fourth and fifth pitches were easily drilled. Steve headed down the fifth pitch, giggling at the 'inventive rebelay anchors' and then proceeded to unpack the battery pack. Somehow the wiring spaghetti managed to tangle itself and short itself out across the battery terminals, and weld on solidly! Oops. By the time (5 minutes later) I got down and yanked the wire off the battery, we all imagined that the battery had definitely flattened. However, luck was with us, and the lighter gauge wire used to link the two gell cells together had fused, saving the day. So, we did manage to get the two holes drilled at the top of the last pitch, with the battery still going strong. That was a relief. All the holes are pretty much in the positions indicated in the pictures on page 15 of this Spiel.

Next step was the glueing; we had planned to drill on the way in and glue on the way out. Obviously it would be faster glueing on the way down, but not all the holes were in, so we thought this was the best option. With our experience from the Test bolts at the X-Benders quarry, we had all the right gear, rubbish bags, rags, icy-pole sticks, rock dust (for covering the surface pink epoxy around the bolts) etc. The first two bolts went in well, but we did need several hands to hold hangers, glue-guns etc. We did a very clean glueing job, with no spills/mess. Things seemed to be going quite smoothly; however by the time we were at the top of the fifth pitch, we found that the glue had set in the nozzle of the gun. No drama, we had a spare, but only one spare. We got the two bolts done here with the new nozzle, and also the two bolts at the top of the fourth pitch. However, by the time two of us had reached the top of the third pitch the glue had set in the nozzle again (even though we expelled some to waste after the first person had made it up the pitch). Without any more nozzles, we had no option but to head on home, exiting the cave a shade under 5 hours from when we went in.

According to the specifications, the Swiftchem resin @ 5°C gels/set in 20/80 minutes; @20°C gels/sets in 6/30 minutes; the times decrease swiftly with increasing temperature. It was quite a warm day (27°C in Hobart) and Midnight Hole was blowing hard, the in-cave temperature was probably a lot closer to 20°C than it was to 5°C, giving us not much time to work with! Still, that's another lesson. And, yes, we realise that it would make more sense to glue on the way down, as abseiling is a lot faster than prussiking (expecially for aging/out of condition cavers!).

So, after two trips, we have learned quite a bit and still have 6 hangers to glue in place. This should take very little time ~ half an hour, but we also have to derig and to 'repair' some of the old bolts and fill in the old holes, so the third trip will still be a reasonably full one.

In the next Spiel there should be a report on this trip, plus some advice of how to 'check before use' and 'the correct way to use' the new P-hangers.

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STC WaReHoUsE SaLeS

Publications

- "Caving Safety 1 Manual", 92 pages, covers Planning, Safety, Maps, Gear, Rigging, Emergencies etc. $20.00
- 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
- **Packs of other sizes made to order, just ask.**
- Aluminium Bars for Rappel Racks. $5.00 each
- BATA full-length Gumboots, Size 9, Green with Orange Sole, and steel toecaps. $25.00

Tape

- currently out of stock.....Are there any preferences for what we restock with??

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.

FOR SALE-for any of the following contact Jeff on 62238620, or via jeffbutt@netspace.net.au

QH Cave Blaster light (Really SEE the cave!)
50 (or 20) Watt QH dichroic bulb mounted in a PVC fitting. Wide angle to narrow beam lenses available. Perfect to highlight large chambers or to highlight specific features. Convenient to hold in your hand. Secure switch that will not allow a Chernobyl in your pack! Runs off a 12 Volt sealed lead acid battery (not included)-$30.

Sealed Lead Acid (Gell cell) Caving Lamp.
Reconditioned Oldham headpiece connected to a new Yuasa 6 Volt/7 Amp. Hr. sealed lead acid (gell cell) in an Oldham battery case. Belt included. Very reliable. A robust and inexpensive light to cave by. Runs for 14 hours at 3W. $140. ($10 extra for QH option).

Gell Cell Charger-to suit the above lamp.
Through the headpiece charging; small, robust and portable, runs off the mains or plugs into a car lighter socket. LED's indicate charging status. $65/$80 depending on options; ask for details.

Sewer Pipe Caving Lamp.
Reconditioned Oldham headpiece connected to a 3 D-cell Sewer Pipe battery case, with belt. Run on Nicads (~10+ hr duration) or Alkaline (~20+ hr duration) batteries. If you prefer an even smaller battery case, then a 2 D-cell option is available. Very sturdy and compact light; great for expeditions or international travel (you can get D-cells anywhere). Belt included. $140. (batteries not included) ($10 extra for QH option).

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!