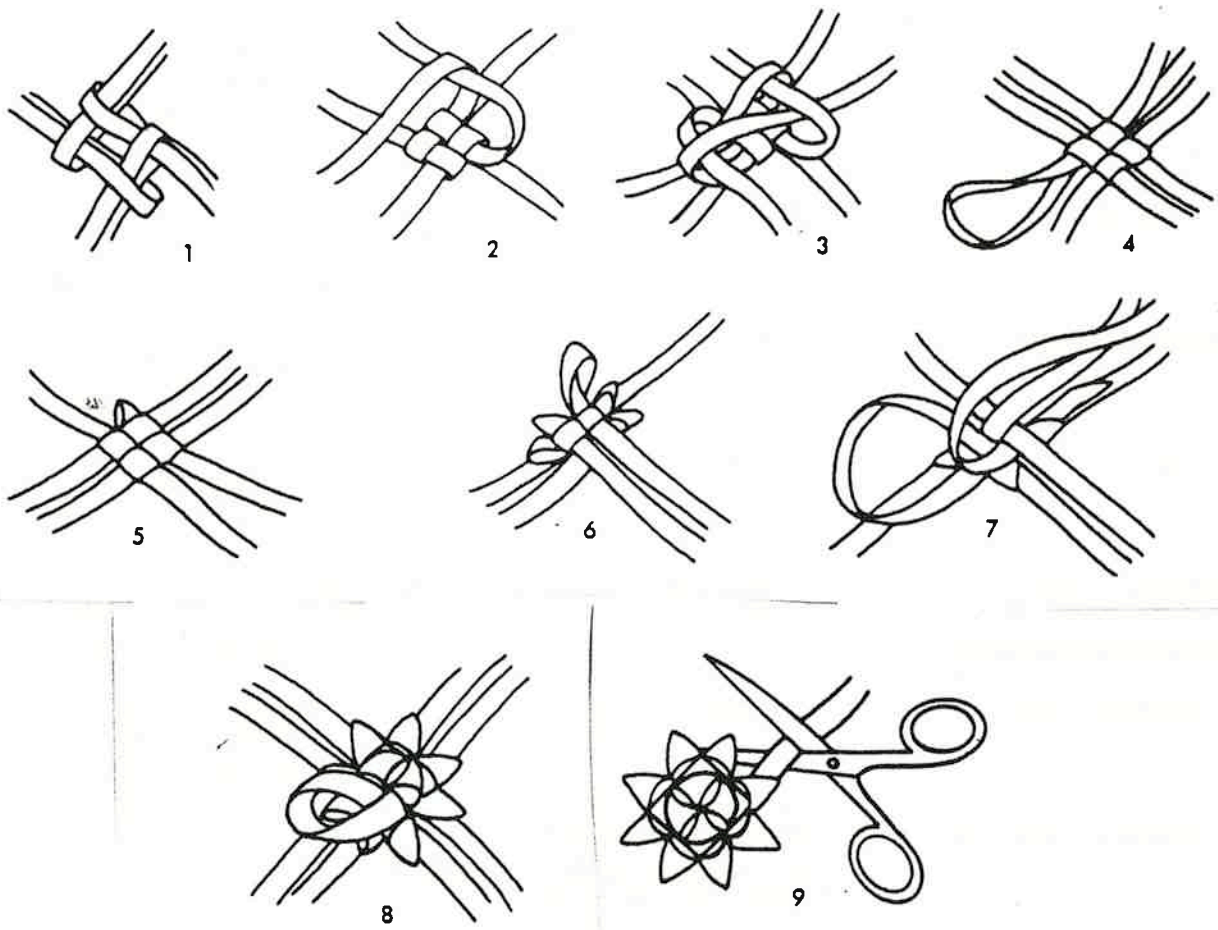
Simon

FUSSI

Vol 3 No. 4, December 1991



When giving a krab to some-one you love,
decorate in style with this paper ribbon

THE QUARTERLY NEWSLETTER OF THE FLINDERS UNIVERSITY SPELEOLOGICAL SOCIETY INCORPORATED.

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Contents

Editorial

Well, what a marathon effort this has been - a whole magazine in two days - just goes to show what a little pressure can do (now if I could only pressure people to write something). My thanks go to those people who wrote for this issue.

With exams over for another year, we can turn our thoughts towards caving. Jindabyne seems the place to be this January, for the ASF conference - see you there.

Jonathon Walsh

P.S. Upon receipt of our new harness, Nathan was heard to exclaim "I wasn't expecting that". John C. (the guy who ordered it) replied "Neither was I" (well I thought it was funny)

P.P.S. Nathan Watt drinks **Beaujolais** - and Clare does too when no-one is looking.

Toxic hazards from Carbide

Calcium carbide is made from coke and limestone in electric furnaces. The raw ingredients have impurities such as nitrogen, sulphur, phosphorous, arsenic and others, that show up in the carbide. When reacted with water, they produce ammonia, hydrogen sulphide, phosphine, arsine, methane, and other chemicals, in addition to acetylene. The amount of each impurity in the acetylene is extremely variable, depending upon the sources of coke and limestone. Some of the impurities are quite toxic. The following is a summary of some information I have found on approxiamate maximum concentrations (in ppm by volume, if not otherwise shown) of these impurities, with some comments on their toxicity and combustion products (excluding water):

** Concentration of combustion products depends upon the degree of dilution after combustion. The potentially most dangerous combustion products are sulphur dioxide, carbon monoxide and arsenic oxide. I have never detected sulphur dioxide (by smell) in the combustion gases: carbon monoxide is small if not negligible from a proper flame (acetylene from carbide was once used for home lighting).

??? I could not find data on arsine ranges in acetylene carbide.

Ammonia would dissolve in the water used to generate acetylene, and less is present in the gas. The most dangerous material in unburnt acetylene from carbide is phosphine. Phosphine is the primary source of the characteristic smell of acetylene from carbide. The maximum allowable concentration of phosphine (0.3 ppm) could be reached if one ounce of carbide is reacted in a 125 cubic-foot room (ca. 5x5x5 feet). The resulting acetylene concentration would then be 0.25%, below the explosive limit - they say. Very toxic concentrations of phosphine, even if only small amounts, are inhaled when checking for gas flow or leaks from lamps by sniffing. The symptoms of phosphine poisoning are "Pain in region of diaphram, a feeling of coldness, weakness, vertigo, dyspnea, bronchitis, edema, lung damage, convulsions, coma, death."

Carbon dioxide from acetylene combustion has been found to be a hazard in close quarters in poorly ventilated chambers. The carbon dioxide produced by burning the acetylene from one ounce of carbide in a 5x5x5 foot room will create a level of 5000 ppm carbon dioxide; the decrease in oxygen will be about 0.4% out of 21%.(The effect is sometimes described, incorrectly, as "lack of oxygen".)

The solid waste from carbide, calcium hydroxide, is caustic, and very toxic to aquatic cave organisms.

I have never heard a report of anyone showing toxic responses to the gases produced by carbide lamps, except from carbon dioxide. This is probably due to the low levels of exposure that occur.

Source: Electronic Mail
Rane_L._Curl
Mon 4/2/91

Chemical	ppm in gas	Max. allowed	Combustion Products
Acetylene	ca. 100%	sufficient	carbon mono/di oxides
Ammonia	(3000-5000)	50	nitrogen
Arsine	???	0.05	arsenic oxide (solid)
Arsenic oxide	???	0.5 mg/cum	-
Carbon dioxide	**	5000	-
Carbon monoxide	**	50	-
Hydrogen sulphide	150	20	sulphur dioxide
Phosphine	120	0.3	phosphoric acid
Phosphoric acid	**	non-toxic	-
Sulphur dioxide	**	5	-

Lingerie Shopping in The Gammons

Lingerie shopping at bargain basement prices was not a consideration when organising a trip to Wooltana Cave, but more of that later. After contacting the NPWS Ranger at Balcanoona explaining our intentions and being advised that it was a big hole that needed ropes and ladders, I felt the trip was on.

Total SRT trips in SA are hard to find - Wooltana lends itself to it very nicely so we were all pretty excited at the prospect and we trained hard before going: rope, tree, pulley, 2 metres off the ground, 50 metres at a time.....Boring!!!

Picking up Rick before he was awake we headed North. The drive was uneventful, we even managed to miss the railway crossing before the coal train, a very long one, went through. The countryside is dry and magnificent, club members recently had a bushwalking trip in the area and we were all a little overawed. Camping spots are hard to find in the area of the cave but we managed, thank goodness for airbeds.

Rigging the cave was my job, probably because I threatened to spit the dummy if I was not allowed to go first.

I had double chained my rope in the rope bag for convenience, it became decidely inconvenient, as I balanced at the edge of the yawning abyss and threw it downward. Poor preparation - it could only get better. I managed to find the first re-direction, totally missed the second one, I was looking on the wrong wall and rigged the rebelay into the last pitch. The rock is not good to put it mildly, so when I heard a "below", I was surprised to see a pair of gloves go sailing into the bottom of the cave. Rick was lightening his load. I whaletailed downward only to get a mighty crash on my Cassin helmet, the call of "SHIT PETZEL" is not in many manuals, but that was the call, and the light still works. Viva la France!

Others followed; Di with the sticky prusik cord, which was given heaps of verbal abuse, came in next, a quick fight with the self abseiling rope protector and down to the bottom

Meanwhile Dave was clipping in, or attempting to, maybe I should have left a larger loop in the rebalay. At last we were all in the cave and it was time to explore.

The mining history in the cave was great to see, old candle boxes, bottles, tin cans, and mining equipment, sieves, etc. and more amazingly newspapers, Tuesday May 23rd 1931 - The Register and The Chronicle July 31st 1931, hence the lingerie, Milanese Bloomers on offer, a snip at 4/6d a pair, Buckboard £14 or a Dodge truck for £29, adverts for Laxettes (who needs them after that descent) and White Flash Petroleum.

In another part of the cave was what could best be described as a 'cuddle of bats', approximately seventeen Dave counted, personally I thought it was a Bat-like Medusa.

'Coming out' preparations began, Dave's snake smiting sabre tamely cut some chocolate paper into strips to mark the bolt locations, hopefully this would make them easier to find. Rick went first doing his iron man act using soft ascenders and finding the extra stretch in a new rope, he found and fixed the second re-direction on his exit. Dave followed, claiming he was too stuffed to swear all the way out, even his whistle was hard to hear. Di followed and remarked how enjoyable it all was, bloody athlete, then it was my turn. The ascent was unremarkable except for the stripping out and picking up the extra gear, I must have looked a bit overloaded, the hoots of laugter at the top on my exit was witness to it all.

Lessons learned: Roz, don't get the flu two days before a trip and step off the track when a large male Kangaroo thinks he owns it. Di, get rid of the sticky prusik cord and change your descender to something slower. Rick, try and look tired, even briefly, it makes us feel better. John, don't chain your rope, and wear glasses - you might then find the bolts. Dave, get a bigger pea in your whistle.

Monday was the return day to Adelaide, a drive on the dirt via Blinman and Wilpena rounded off a perfect trip. We didn't find Thunderdrum, but we all agreed we will be back.

Many thanks to 'Krunchie' for his trip reports, they were invaluable and required reading prior to any visit.

For club members contemplating a visit, practise SRT prior to your trip, the rock is not good, alow a single person on the rope at any one time.

Equipment used except for personal gear:
2x50m Bluewater rope & krabs
1x2m tape and krabs
1x3m tape and krabs
(re-direction)
2 rope protectors (top & bottom)
Long sling around big boulders for main top anchor
Whistle signals were used but a good bellow will be heard.

Yours aye,
John Callison

TROG DELIGHTS

LIBRARY NEWS

Journal of the Sydney Speleo Society . Vol 31. No 11. Newsletter of the Sydney Speleo Society.
Some very interesting letters from the 1890s concerning trips to Jenolan by the Duchess of Buckingham. Trip reports to Jenolan. Notes on what is happening over the next few months. A President's colum that reads like the operation's sheet for the day's work in Theatre One at the FMC! Let's hope that they all get well.

Journal of the Sydney Speleo Society . Vol 31. No 12. Newsletter of the Sydney Speleo Society.
Report on vandalism at Bungonia by the Ranger of the Bungonian State Recreation Area. Very distrubing when the finger is pointed at the caving fraternity. Trip reports to Wombeyan and the discovery of Ooloop passage in Mammoth cave at Jenolan. A newspaper clipping reporting the fall of a Jenolan caves' staff worker injured in Aladdins Cave. Notes on what the sociey is getting up to for the followin months. Report of yet another couple of accidents at Bungonia, one of a parachuter who crashed into the wall of the canyon several times, hitting a climber on the way down, and ended up on the ground with broken legs, arms, ribs, and internal injures. Now in a very serious contition in hospital. Parachuting is banned at Bungonia as the conditions there are too dangerous.

Caves and Caving. Autumn 1991. The bulletin of the British Cave Reserach Association.
Contains everything from stories concerning hydrologists investigating Crackpot; News from exploration in the USSR and associated conferences; A book review with subliminal messages dealing with men with beards who have a bloody silly hobby, Letters to the editor dealing with the restructure of the British Cave Research Association and the National Caving Association. An article on the history of Speleology of Great Britian, France and Greece.

NSS News. Sept 1991. Journal of the National Speleological Society USA.
Edition given over to a report on the fiftieth anniversary of the National Speleologial Society. An interesting article on Bats on Postage Stamps, abstacts of press reports dealing with caves and tourism.

NSS News. Oct 1991.
Report on the Joint Russian and American expedition to Sneznaya Cave. If you want to know about abseiling into ice cones on 8mm rope and trying to control a decent using a stitch plate and titanium carabiner, then this report makes for some excellent reading. An article on equipment strength and safety, which tries to discuss the Strength vs Reliability vs Safety issues in the gear we use. Notes on the international scene.

Australian Cave and Karst Management Association Newsletter. No 8. Dec 1991.
Write up of the latest ACKMA Conference in Perth. Reviews of Karst Management on NSW and Tasi. Article on dating speleothems, using Carbon dating, Uranium series dating and Electron Spin Resonance dating. Each of these types of dating measures a differnent time scale: Carbon dating up to 35,000. Uranium up to around 350,000 and ESR for that which is older then 350,000. A write up on the tours run into the Bat Cleft at Mt Etna and the associated times of flight of the Little Bent Wing Bat *(miniopterus australias)*. News from New Zealand and Chillagoe and reports from Presidents and their associated demi presidents of the executive. We note that Andy Spate is now the Groupen Führer of ACKMA! How much did they pay him!

Cegsa Newsletter. Vol. 36. No 4. 1991.
Trip reports to interstate caving areas, Jenolan and Wombeyan. Reports of trips to the Murray plain, Lower South East, Flinders Rangers, and Tasi. Additions to Occasional Paper Number 5. A write up of the SASC, and a notice of the forth-coming Competent Caver Training Course. A little article on safety and training, dealing with keeping the group together.

Cave In. Vol. 3 No 3. 1991 Newsletter of Cavex.
Publication of the legend used in cave mapping. Reports of trips to the Flinders Rangers and Curramulka and some diagrams of the Bowline and Alpine Butterfly knots. Reprint of an article on the life cycle of the Bent Wing Bats, good for basic reference.

Trog. Vol 27 No's 1, 2, 3, 4 & 5. July-Nov, 1991. Newsletter of the Kempsey Speleo Society.
Reprints of the dairies of Eric Tanner, written about the time of KSS's formation, (1950s). Trip reports from all over the continent, Nullarbor and around the Kempsey area. Press clippings on the spiders found on the Nullarbor by Mike Gray.

Troglodyte. Vol 2 No 12 Oct 1991. Newsletter of the Northern Caverneers Inc.
Notes on events in Mole creek, NCC has a rep on the Dep't Parks Wildlife and Heritage Cave Management Committee. This committee it seems will dicuss, amongst other things, permits to the currently closed Kubla Khan Cave for people coming form overseas and perhaps interstate.

Mucg-Raker. No 2. Formerly Quaver: Notes from MUCG. The occassional newletter of the Macquarie Uni Caving Group.
A compilaiton of trip reports for the years 1988 to 1991, with some good cartoons to relieve the activity.

Nargun Vol 24. No 4. Oct 1991. Journal of the VSA.
Summary of surveys completed. A note on bat research and a comment on the draft Management Plan for the Karst and Cave Resources in the Buchan and Murrindal Areas.

TROG DELIGHTS

LIBRARY NEWS

Nargun Vol 24. No 5. Nov 1991. Could also be known as the Peter Ackroyd special as he seems to have written most of it.
Maps of Bat Cave (P-6), Skylight Cave (GL-20) Gaping Gillingal (GL-1) and Celeb Cave (W-22). A very disturbing note on the implications of what can go wrong when you allow people to use your good name. A reiteration of the need for managers and cavers to work together. A review of the ACKMA Conference, which mentions the paper presented by Brian Clarke on the Liciencing of cavers to occur S.A. *(See this issue of Fussi for full details of that policy,ed.)* A tour of Western Victorian Karst, a nice quite surjourn via the odd bakery and tourist venture. A bit of tootling through Flower Pot at Murrindal. A report of a trip through Wombeyan Caves detailing some of the changes that have taken place over the last twenty years of so. Dr J. McNabb is looking for hints on how to stop bat guano from fouling Muesli Bars, this is of utmost import to hard cavers! A note on the management of karst in China and its cultural use. A "must read" for those going to the International Speleological Conference to be held there in 1993.

Nargun. Vol 24 No 6 Dec 1991.
New method of lighting one's top ascender. Attach a Kaboon to it. NB do not use the electric option, only use the carbide appliance! It will really burn you up. Write up on the latest Friends of Buchan get together. A note on what is on for the next few weeks.

Tasmanian Cave and Karst Research Group Journal. No 5 Oct 1991.
Review of Smaps, a computer survey system for the drafting of maps. Write on the problem of Benders Quarry and Exit Cave. The use of caves in long term military occupations, well worth a read if you want to know how the running dog lackies of the military industrial complex make use of the underground bunkers that we call caves! Bone deposits in Gelegnite Pot and an article on the geoglogcal background to karst in the Weld River area. An update of the maps produced by TC&KRG.

Helictite Vol 28 No 2 1990. Journal of Cave Research. Discussion of karst water chemistry of the Limestone Ranges, near Fitsroy Crossing W.A. Paper on the lead in Cave Spider's Webs at Jenolan and a review of a computer program called DeltaGraph, which is available on Macintosh and draws 3D cave maps.

Helictite Vol 29 No 1 1991. Papers on the Mt Cripps Karst of N.W. Tasimania. A geological view of Abercrombie Caves, and the Sulfate Speleothems of Thampanna Cave, Nullarbor Plain.
Mavis has not been idol.

Access "Policy" to SANPWS Managed Caves.

Background.
This paper is reproduced in the interests of letting you all know what we are in for as far as caving in NPWS controlled caves is concerned. This paper was first cicualated in 1990 as the Draft Policy on Public Access to Caves on SANPWS Managed Caves. That draft document was put out to public comment and what follows has apparently taken into account the veiws expressed in the replies to it. I suppose one could say that this is the second drafting of it and it is also the last. Mr Brian Clark presented this policy to a hastly called meeting of the in South Australian Speleo Council in October this year, 1991. It was presented more or less as a fait acompli and the Speleo Council is now in the process of working out how to set up the accrediation scheme.

1 INTRODUCTION
Caves require special management attention within the broader context of environmental management. Values which relate to caves as natural phenomena include:

- geological interest;
- geomorphological interest;
- mineralogical values;
- palaeontological values;
- archaeological and cultural values;
- hydrological values; and
- provision of habitat for specific fauna and flora

These varied natural values provide a resource which, through research, enhances our understanding of past climatic and geological events. In addition, sheltered cave environments provide habitat for a range of relic or sparsely distributed species of plants and animals. Such species offer insights into the evolutionary processes and, as they often exist in relatively closed communities, a range of ecological processes not readily studied elsewhere.

Added to these natural values are social values including:

- opportunities to visit places of curiosity,
- fantasy or physical challenge;
- opportunities for tourism, recreation and education and cultural interest.

These values place a demand on a effectively non-renewable resource: the caves of South Australia.

Sensitive features of caves include speleothems, sediments, fossil deposits, rock faces, cultural sites, and cave dwelling fauna and flora. These features are particularly prone to disturbance from users, pollutants,

Access "Policy" to SANPWS Managed Caves.

and changes to the cave atmosphere and natural hydrology.

2 MANAGEMENT CONTEXT

2.1 Introduction

Many caves in South Australia occur within reserves managed by the South Australian National Parks and Wildlife Service (SANPWS), which is a manager and custodian of land, wildlife and sites of natural and historical significance throughout South Australia. It is also an educational.and advisory organisation which assists the public in understanding and enjoying the State's heritage while ensuring that it is preserved for future generations.

2.2 Objectives of Cave Management

The National Parks and Wildlife Act, 1972 (Section 37) provides general objectives for the management of reserves, and the following pertain to the management of caves in reserves:
The Minister, the Chief Executive Officer and the Director must have regard to the following objectives in managing reserves:

the preservation of wildlife,
the preservation of historic sites, objects and structures of historic or scientific interest within reserves;
the preservation of features of geographical, natural or scenic interest; and
the encouragement of public use and enjoyment of reserves and education in, and a proper understanding and recognition of their purpose and significance.

In addition to the general objectives cited in the Act it is proposed that the following objectives will apply to the management of caves within SANPWS reserves. Visitor access to caves will be permitted, subject to any management plan, and regulated having regard to:

the conservation and protection of the natural and cultural heritage of caves;
education and appreciation of caves and their related features;
research into and documentation of cave values;
allowing natural cave development processes to continue with minimal disturbance;
the restoration of degraded cave systems; and
the protection of the habitat and communities of plants and animals of caves.

2.3 Role of Management

The Regulations under the National Parks and Wildlife Act, 1972 provide for specific legislative protection of caves within reserves. Regulation 10 provides that:
A person must not, without the permission of the Director

a) enter a cave within a reserve (except in the company of a warden or person assisting a warden;
b) remove or displace any rock, mineral or fossil in a cave;
c) disturb or interfere with any plant or animal (whether dead or alive) in a cave;
d) touch or interfere with any karst calcite formation (speleothem) in a cave;
e) urinate or defecate in a cave;
f) deposit any organic or inorganic matter in a cave;
g) disturb, touch or interfere with any Aboriginal art or artifact in a cave;
h) use any paint, dye or marker in a cave, or release any substance into the waters of a cave;
i) light a fire or burn any material in a cave;
j) smoke any tobacco product in a cave.

Regulation 30 provides that a person must not, without the permission of the Director, carry out scientific research in a reserve.

The purpose of the Act is "to provide for the establishment and management of reserves for public benefit and enjoyment; to provide for the conservation of wildlife in a natural environment; and for other purposes". The role of management therefore is to find an appropriate balance between these opposing objectives.

In the case of managing access to caves the task of deciding who should be permitted to visit which caves and for what purpose is a complex one. In order to protect caves in SANPWS reserves and provide adequate opportunities for user groups, a policy is necessary to classify caves and regulate visitor access.

3 CAVE CLASSIFICATION

3 .1 Introduction

To manage caves in reserves, the SANPWS has adapted the standard cave classification scheme. Classification will be determined by SANPWS subsequent to consultation with the South Australian Speleological Council (SASC) and recognized speleologists. Where a cave or site has cultural significance to Aboriginal people the SANPWS will consult with the relevant Aboriginal organisations or individuals and the Aboriginal Heritage Branch, (Department of Environment and Planning).

A cave may have sites of more than one category. The classification of a site will be reviewed if its significance or condition is modified by any subsequent discoveries or any deleterious impact. Unless otherwise provided for in a management plan the following classifications and management guidelines will apply.

3.2 Category 1: Caves Providing for Public Access

This category relates to those caves which are actively presented and interpreted to the public for aesthetic appreciation, education and recreation.

Show Caves. The emphasis in this subcategory is on public education and aesthetic appreciation. Access will be either guided or self-guided, or with written approval for research.

Adventure Caves. The management emphasis of this subcategory is on aesthetic appreciation and physical recreation; Controls on access and activities will depend on the nature of the site, with route selection and visitor behaviour avoiding exposure of vulnerable

Access "Policy" to SANPWS Managed Caves.

features to damage. This subcategory is for those sites which are managed for general visitor use and which require little equipment or experience for a safe visit. It is not intended that recreational caving by organised groups will take place in caves of this subcategory. Access will be either guided or self-guided, under provisions as provided for in plans of management adopted for each reserve, or with written approval for research.

Wild Caves. The management objectives for Wild Caves are to protect site values, to provide opportunities for research, and to provide opportunities for recreation and exploration. Access will be provided to individuals holding SASC (South Australian Speleological Council) Accreditation Committee endorsement (see Section 4). Access to water filled sites will require the appropriate Cave Divers Association of Australia (CDAA) accreditation.

3.3 Category 2: Special Purpose Sites

This category relates to caves or sites where there is a specific need to protect special values.

Reference Sites

This subcategory will provide for protection of relatively undisturbed baseline sites, and conserve an example of types. Access will only be provided for research specifically related to baseline functions, where such research cannot reasonably be carried out elsewhere.

Sites of Special Value. This category will apply to any site where protection is necessary to maintain scientific, nature conservation, cultural, educational, or aesthetic values. Access will be permitted for documentation and research to enhance management of those values, or approved special interest groups, under appropriate conditions.

Dangerous Sites. The management objective for sites in this subcategory is to protect human life. Access may be provided for research by appropriately trained and equipped persons.

Unclassified Sites. Unclassified Sites will be managed to allow investigation of site values, such that the classification of each site may be based on reasonably complete information. New sites and extensions to known sites discovered within reserves will be listed as Unclassified until sufficient research has been conducted to determine their most appropriate classification. Access will be provided for research only.

4 ACCESS ACCREDITATION

The major causes of damage by visitors include:

- overcrowding;
- overuse;
- inadequately trained group leaders;
- inappropriate ratios of leaders to inexperienced cavers;
- mismatched objectives, where the purpose of a visit is incompatible with management objective of the site; and
- vandalism.

Although the cave classification system provides guidelines to determine appropriate purposes for entering caves it does not determine who should be given permission to enter caves. It is therefore necessary to adopt an accreditation system to assist managers in providing appropriate access opportunities. Accreditation will be provided by a committee formed by the SASC. The development and implementation of this SASC accreditation system will be subject to acceptance by the SANPWS.

5 ACCESS APPROVAL

Access to caves managed by the SANPWS will be subject to a permit system. The administration of the permit system will be the responsibility of the reserve manager. The manager will maintain a register of visits and proposed visits to:

- ensure that overcrowding/overuse does not occur,
- provide a record of visitor numbers and accreditation levels to facilitate the monitoring of visitor impact; and
- provide a record of research undertaken.

The manager will consider all written applications lodged no less than four weeks prior to the intended visit, and containing details of the purpose of the visit, and listing the names of the members of the group and their level of SACS accreditation, and CDAA accreditation if required.

No more than two weeks after receipt of the written application, the manager will, in writing, either provide or refuse permission to enter the site. Permits will be issued only after the manager is satisfied that the purpose of the visit is compatible with the classification of the cave and the objectives of the management plan (or in the absence of a management plan, with the objectives of the National Parks and Wildlife Act, 1972).

Unless specified in a Plan of Management, the maximum party size for groups not under the direct supervision of SANPWS will be eight persons. The minimum party size will be four persons. The SANPWS will have regard to any conditions or provisions required to protect site values before any approval to enter a site is granted In exceptional circumstances, such as for search and rescue, SANPWS may exempt requirements for accreditation, written applications, and group size.

6 FEES

A fee will be levied for the issue of access permits, except where access is provided for:

- by a scientific research permit; or
- management initiated rehabilitation of cave values.

Revenue raised will be credited to the General Reserves Trust account to fund SANPWS approved projects to enhance cave management. The fee structure will be based on a per person, per day rate.

Of Floral Gardening Gloves and Painted Nails

The suggestion for having a Women's Only caving weekend had been floating around in the ideas box in Fuss for a couple of years, but none of us got around to oganising it until October this year. The rationale for the weekend was to try and gain a few more women cavers to help redress the incredible gender gap that exists within the caving world. So we passed the word around to the major caving groups in Adelaide, CEGSA, SCG and CAVEX and ended up with about ten inquires and a total of six cavers for the event.

The last Sunday in Oct was settled upon as the date for the trip and for the introduction of daylight saving (a minor event that was to have repercussions as the fullness of time passed). I organised the key, the gear and the transport and suggessted we meet on the Sunday morning at 9am. Everyone agreed and thus it was supposed to happen. The turning forward of the time piece usually causes an hour to be lost in the time continum but for some this didn't occur. The result was that the transport for the leader of the group was an hour late in picking her up and therefore an hour late in getting to the meeting place. Not a happy moment as we women tend to party late into the previous night and the extra hour's sleep would have gone down very well thank you!

We managed to get ourselves oganised enough to venture into the depths of Corra Lynn, with Pam Storer making a totally new fashion statement that makes the usual garb of the caver look like last seaons Melbourne Cup fashion. Not for nothing is bright red nail polish used. Nope, if you want to maintain your style and keep your long nails intact then, a coat of the best tart red that you can buy is the way to keep them from being shredded by the body eating rocks of Corra Lynn. Over this, the placement of a bright floral set of gardening gloves, colour co-ordinated with the red of the nail polish, the green of the overalls and the dusty brown of the Rossi Eagles foot-ware. Yep, none of this worn out and patched overalls co-ordinated with hay carting gloves and rubber boots! Some of us are now devising the new look for men who like to cave with a bit of flare: reflective bow tie, Gucci made overalls with the gold thread on the seems and padded in the right places. But I digress.

Back on the steps just inside the door of Y2, there nesting on a couple of eggs were the resident pidgeons. They had made a nest to the left of the main track down the stairs with two twigs and nought else. The proud expectant parents hid around the doorway waiting for us to pass.

Spent a couple of hours around Ground Central and map reading, always a challenging process in Y2. Some of the party had exteme difficulty coping with the idea of going through small holes and traversing along cravesses. A few demonstrations that this was indeed possible, and concepts of what one could do with one's body were vastly expanded. Despite this however, it was decided that the route through to Skeletons Cravass via Bandicoots Bypass could wait to the end of time and that a standing up, walking around and more enjoyable approach to caving was needed.

So it was a couple of hours of: look at map and "I think we are here." "Why?" "Well you can go around that rock there, and it fits with this rock on the map." Silence. "No, I think we are here because we came along here and then Fern went up there." Silence. "Lets orientate the map." "No we aren't, we are at the botton of the cravass, the map doesn't show height only width and length, we are," pointing at the map, "going along here." .....

This was followed by myself asking that really difficult question of all novices, "who knows the way out." Various suggestions were offered and it was decided to follow some of them to see if they did lead to out and lunch.

Ten to fifteen minutes later found us on the surface washing off the dust. Lunch was shared and conversation roamed around caving, caves, gear, food and the necessity of having at least a couple of avocados for lunch, and life and the universe.

The after lunch surjourn saw some real caving happen, yep, the crawl along and thank the goddess for knee pads. Out to the Wombat runs and Crystal Chamber, trying not to get lost and read the map at the same time. Fern in the lead and myself and Pam Storer keeping up the passive role of leaders at the back. A small detour was had which we all blamed on the map for being wrong, and we soon found our way out to Bushwalkers Chamber keeping an eye out for gypsum needles, fossils and the odd, very odd in this section of the cave, calcite speleothem. The reward for the crawl out to Bushwalkers Chamber is a sparkling flat roof just as you enter the chamber and a noticable change in wall structure from pheatic tube and cravass to rock piles.

The return from this section saw the collection of the remaining beer bottles and cigarette stubs left behind by the crew that broke into the cave a few months earlier. They had done an excellent job of door breaking and left a trail of debri for all to see and clean up for some months later. They failed to break the lock but broke the door in the process of trying to get the lock off.

No problems of finding the way out as all three Pams lead the way. Fern, Sam and myself got a little distracted looking at a fossil dig and discusing teeth. We met up with the three Pams, and decided to leave the pidgeons alone until next year, with no doubt a couple of additions.

It was a great day of fun and leisure and we have planned a few more Women's Only trips. Given a couple of years we may even mount the Women's Caving Expediton to Cuba!

C. Buswell

OLD HOMESTEAD CAVE - 1991

Australian Nullarbor Caves Expedition 1991. 22 Sept. - 12 Oct.

During the second week of the mid-year break Clare Buswell and myself had planned to join a group of intrepid caving types and set off for Old Homestead cave (N83) on the Nullarbor Plain, 42km south of Forrest and 90km north of Mundrabilla on the East-West highway.

On the Friday, we joined up with Steve Milner, Mark Sefton, Graham Pilkington (all CEGSA), Chris Kemp (Sydney Speleological Society, SSS) and John August (Macquarie University Caving Club, MUCC), travelling in two vehicles kindly provided by Mazda - a van to carry our gear and a 4WD to tow a trailer and for use as a runaround. Both were liberally sprinkled with sponsors' logos, a location map, and the name of the expedition.

At this point I must congratulate Steve Milner (originally with the Bristol Cave Explorers, BCE - Motto: "Everything to excess") on a fantastic job in getting $7000 worth of sponsorship for the expedition.

So, here we were, at 5.30pm outside the Hackney bus depot, waiting for the channel seven crew to turn up for the "photo opportunity" and a chance for immortality for us, and to give the sponsors free TV time.

They did eventually turn up, but as it was pouring with rain they decided to head for the nearby pub instead and we returned home to finish the packing which had to be cut short to keep the date with fame, fortune and the TV crew (Channel Ten did give us a spot after the return home).

Having finished stowing a large portion of the supplies for thirty cavers to last three weeks, including 80 loaves of bread, we set off in earnest at 7.30.

By Port Wakefield we were feeling tired after the adrenalin rush of organizing such a large undertaking and phoned ahead to Port-a-Gutter to book a caravan for the night, abandoning all hope of reaching points further west by driving through the night. It proved to be an inspired move: cheap with seven sharing the cost, a cooked brekkie and shower, and, contrary to popular belief, sharing a small space with six other cavers was not as disgusting as may be imagined.

Thence onto Ceduna and a final chance to fill up the 30 containers, brought (empty) for that purpose, with rainwater. It didn't seem to bother the 4WD which was towing the trailer containing the water and spare fuel much and we happily kept up with traffic, arriving at Mundrabilla homestead just on sunset (preserved on film by Steve), only stopping for fuel, drugs and a view of the Great Australian Bight.

Graham obtained permission for us to doss down in the old shearer's quarters and we gave our caving lights their first outing as it was dark by now. Another restful night (no snoring!) and we could even forgive Graham for waking us at the crack of dawn.

More filming as we headed up the escarpment and then it was time to find the road to Forrest. This was a little difficult as the farmer had put in a new dam and the drainage ditches were almost indistinguishable from the road (and in better condition!). We turned right between the two dams and, ninety or so kilometres and three hours later sighted the Old Homestead Hilton, populated at this point by DEDCATS (Doncaster East and Districts Cave Activity Team, Scouts): Adrian, Damian, Chris & Julian. Four skilled lads with a taste for adventure and beer.

Rick and Karen had arrived independently and also set up camp. All were wondering where we were, as the Advertiser's roving reporter was there on Saturday looking for a tale.

Chris is the one you see dangling from a rope in the entrance doline in the picture which graced the front page of Monday's paper.

The rest of the day was spent setting up camp, sorting out equipment, sightseeing and making plans for the exploration and survey of the cave.

The cave has two sections: one running roughly south of the doline, and the domain of a Canberra speleo group which had discovered it (the Spring Series), and the northern section which it was to be our task to explore and survey.

Much was already known about the cave, and 12km was mapped, but a large section had only a traverse line to show the trend of the cave, and this we hoped to map more closely. Of course, there were numerous leads, any one of which could dramatically alter the shape of the cave, and its final length is estimated at 30+ kms.

Much of the entrance area had been mapped, with sections deliberately left out so that future surveyers would not be forced to only work at the extremities of the cave. There was a large traverse-only map of the middle section, some mapping of the further reaches, some sections explored, but not mapped and many promising leads.

The plan was to take it easy the first day and close some loops and tie up some loose ends near the entrance, so as to gain familiarity with the entrance series, to allow quick traversal of this most unpleasant part of the cave.

The cave is entered down a well shaft and then a tortuous route through rockpile, via the White Chamber (where the way on was found), more and nastier breackdown, to the main tunnel which is a lovely phreatic tube, sometimes almost perfectly round, four metres in diameter, sometimes lower and wider, or a series of smaller, parallel passages and a floor mostly covered in dried mud, or soft silt where it has been trogged.

It was before this easy section that we surveyed on the first day (Monday). We had broken up into small teams of three to five, with one person drawing the cave as we mapped, the second operating the instruments (tape, compass and clinometer) and the third selecting the stations from which to 'shoot' or take a compass bearing and holding the other end of the tape.

We were using Suunto instruments and found them rugged and easy to use: I would recommend them to the club members. They were designed to glow in the dark, so that we could gain a reading even in total darkness,

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however this feature (which costs an extra $60), is probably of dubious value, as the target you are sighting is completely invisible unless lit seperately, in which case your eyes have difficulty in coping with the contrast of the bright light of the target and the soft fluorescent glow of the Compass or Clino. Besides, it uses Tritium as a radioactive source, thus supporting the advocates of nuclear megadeath.

We did find the use of 'Cyalume' light sticks useful: they could be placed on the target and used to take a sighting - vertical for compass, horizontal for Clino. Much easier than trying to illuminate your finger, and they lasted long enough for our purposes, as I never surveyed for more than eight hours at a time. There were longer trips, but extra sticks could be carried (useful backup light in extreme emergencies) and they should last twelve hours or so.

I worked with Steve and Julian on this trip and we were lucky to have a relatively easy time of it. Steve did the drawing as we went and this is a must if only to check that you haven't made some silly error like having a compass reading back to front. We also took soil samples for biological and geological analysis to determine what impact the humans have on a cave environment, and to discover more about the way the cave was formed. It was when we were sterilising the spatula and gloves by flaming with ethanol that we managed to set me on fire! This is somewhat disconcerting in a confined space but fortunately ethanol burns with a quite cool flame.

There was a log book kept at the entrance to ensure that no-one was left underground and we discovered that we were underground for seven hours and subsequent days totalled eleven, eight and six for a total of 31. Clare clocked up 34.

We feasted and made merry that night having contributed another fifty metres of new passage. Clare had joined Mark's group and found that what looks promising on the map does not always translate into many new metres of passage underground. Others added 200, some found the going real tough, but it was a good opportunity to get used to the equipment and compare caving and mapping styles.

I was using a 'sewer light' and there were a handful of Petzl Kaboom acetylene lights as well as FX-2's and miner's lamps. The combination of acetylene and electric worked well (I still think acetylene casts a lovely mellow glow) with the carbide lamps having a wide beam and the electric lights giving the reach for the long straight passages. However, I still haven't gotten used to the helmet mounted light as , being in line with the eyes, it casts vitually no shadow (that the wearer can see) which makes walking(particularly over rockpiles) very awkward, as a large clue for depth perception effectively disappears. I first noticed this in Mullamullang some time back, and Old Homestead has many similarities with that cave.

The next day was to be more ambitious and we all gathered together with our glorious leader, Graham, taking us to RDF D, a survey station about halfway into the cave. Thus we saw, for the first time (Graham was the only one in the party that had been there previously), the easy bits of the cave. We split up into our groups, Steve, Damian, Chris (for a while) and myself this time, Chris acting as ferret.

We were chasing up some more promising leads about two hours into the cave and we in fact added 423m of new survey of cave where none had gone before! It was easy surveying with long, round (1.5m dia.) phreatic tubes eventually ending in a low crawl over a sandy floor, but drafting well - a promise of further passage.

The cave did show its varying characterstics with large chambers and fantastic mud constructions giving way to phreatic tubes, sometimes on several levels - shaped a bit like a figure 8. The two tubes seperated by weak crumbly rock which at one stage collapsed underneath me, causing shin soreness. There were also several levels evident and Chris disappeared down a lower level for about fifteen minutes, only to emerge with the comment that "It GOES!". We left investigation for the next party.

We emerged well after dark to tales of varying success. Most had a rough tale, with the area that they were investigating turning out to be rather more difficult with a maze of 'cheese grater' rocks being singled out for hours of complaint. Total new passage was about 1km at this stage with several loops closed and loose ends tied up. One section was surveyed twice

I saw little of the 'standard' formations but nevertheless there are many interesting sights in the cave: it seems to have had at least two periods of activity, and the dried mud bed had resting on them fantastic 'space station' like structures. It is speculated that drying mud left cracks which them filled with mineral rich water when this dried, deposits of calcite were left in the cracks which formed a hard structure of wafer thin sheets. Subsequently water washed the clay away again, leaving these intricate and delicate structures lying about the cave.

A side cavern contained beautiful angel's hair calcite 'straws', the dried mud formed many 'broken pottery' sites and the dried mud formed intriguing patterns on the floor where eddies had modified the flow of water.

It was most interesting to go where no-one had gone before! Often we would step into a side chamber covered in white calcite dust; and a new section off the Officer's Mess, discovered in the last days of the expedition, is reputed to be the best decorated yet. It is also in excess of 2km long.

New people had been arriving and we emerged that night to a hearty meal and a roaring fire with bed beckoning to our tired bodies.

The next day was to be an easier survey of the nain passage which had only had a quick traverse done to show the trend of the cave.

We had been enjoying cool weather and the countryside was still green from the winter rains. The flowers were out and the Nullarbor was

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probably looking its best. The doline was home to serveral groups of birds, most likely Kestrels, but possibly also Crows. There were three nests and one had hatched young in it, and the second seemed to have eggs. It looked as though the Kestrels were defending their nest against marauding Crows, but the chicks made very Crow like noises!?

We also saw a HUGE Wedge-tailed Eagle, probably feasting on sheep and the occasional rabbit (we saw more lizards than rabbits, although there were tell-tale signs).

For this day (Wednesday) I joined Phil and Adrian and we spent the time surveying good sized tunnels forming the main passage, resting on soft silt. Phil was a little slower scribing than Steve because he plotted accurately, wheras Steve sketched and filled in the details on the surface. We also came across survey markings in supposedly unsurveyed passage which goes to show that different people will tend to map caves in similar ways, as we tended to use the same survey marks. Sitting in the main passage was quite cool, as the draft was fairly pronounced. I also experienced the phenomenon of blind caving caused by fog. Climbing through the entrance series was quite strenuous and the sweat tended to fog my glasses. Being covered in mud I was not encouraged to wipe them, so I relied heavily on the person in front to find the way. Others reported the same problem. As it was, Phil used a slightly different, easier, route to what I had been, which goes to show you the value of caving with different people.

Back on the surface we found that the DEDCATS had been to Forrest, found the natives very friendly, ordered twenty dozen stubbies for the 'sugar and tea' train due Thursday/Friday and had been given several railway sleepers for furniture. They 'surfed' the trailer home and arrived by the light of and FX-2, as the headlights had collapsed. Chris K. employed the sleepers to make a very servicable kitchen/dining area (he is a cabinet maker by trade). The Scout connection of some of the cavers was evident in the hardware available for cooking on and of particular interest was a hotwater 'pig'. This consists of a twenty litre tin with a copper pipe welded to one end, about 5cm from the edge, and another larger diameter hole cut in the round surface on the same side as the pipe. You put the 'pig' on the fire, filled up with water, waited for it to boil and then added more cold water to the hole. The cold water displaced the heated water which flowed out the pipe. Presto: constant hot water for cuppas/ washing up.

Among the arrivals were Russell Brige and Bill (SUSS) who set up a ground survey to tie in the RDF stations underground and hence give a VERY accurate fix on them.

Thursday I spent again in the main drag finishing off some loose ends, and as we were starting to feel a little caved out, we took it easy. Still, new arrivals and those more athletic continued to add new passage to the survey and by the Friday, we had added about 2.5kms.

By this stage the weather was getting fairly warm. Up to now it had been very pleasant, sometimes with fog till late in the morning, pleasant days, some light rain even, and the occasional thunderstorm and lightning off to the north. Wind was quite manageable with a memorable still, warm night for the full moon.

The DEDCATS were desperate for their grog, Steve needed a break, so we'd arranged for them to give us a lift to Forrest to catch the Indian Pacific back to Adelaide. We packed our gear and headed off.

Forrest is quite a thriving town with the railway, an airport (used by TAA) until recentish) and a meteorological station to while away the hours. There is a guest house to allow pilots to rest and we had use of their shower. Anyone who has been to the Nullarbor will appreciate this last comment!

Predictably the train was late (but had made up time by Pt. Augusta), and we borded in wonderment. For a cost of $125 we got reasonably comfortable seats in the riff-raff class. And riff-raff it was! The air-conditioning was mouldy and the food was diabolical - roughly equivalent to roadhouse 'food', but at least you could go for a walk, although we were confined to the sandwich car, as we were trapped by the even more downmarket riff-raff in the smoking car in front of us. The mob in the seat in front of us only left their dirty books/mags to show the seats were occupied - I think they spent the entire trip in the boozer.

The train journey also provided a 'new' perspective on the Nullarbor - not seeing it from the road (not that its any different), but there are a few more settlements, and you really do pass through the Nullarbor, which the highway only skirts. Despite being dog tired from the caving, I can't remember sleeping and we were real glad to get to Pt. Augusta in the morning, despite feeling like chewed string (where did this expression come from?).

The most frustrating part was the incredibly slow trip from PA into Adelaide! By the time we got there, we were once again two hours late! But we were glad to be back, viewing all the graffiti in the industrial wastelands of northern Adelaide.

The expedition continued for another two weeks, with up to 29 people on site at one time and the end result is 23kms of surveyed passage, making it the longest known cave in Australia and plenty of potential to go. The discovery of a major extension of the cave just before the end was almost expected! It is expected that another expedition will be organized, perhaps in 1993, but all the data needs to be plotted (a huge task) before that can happen.

Finally, I would like to thank the organisers, CEGSA, and especially Steve Milner, Graham Pilkington and Mark Sefton for a fantastic opportunity to expand my caving horizon.

Heiko Maurer

First Semester Programme

FIRST SEMESTER STARTS 2nd March
FIRST SEMESTER ENDS June 10

Jan 15-27		**Yagby and Bungonia.**Co-ordinators: Clare and John: 388-6371 or 388-6685 or 384-1502
Jan. 25-26 1992	9am	**ASF Council Meeting,** Jindabyne
Feb 4th		**Enrollment First Years.** Everybody else sometime during the same week. Suggest you come attirred in your caving gear so as to brighten the process up.
Tue 4th Feb	6.30	**General Meeting.** At Jenny's or Richard's house.
Feb 24		**Orientation Week Begins.** Fair Day to be announced.
Tue 3rd March	6.30	**General Meeting.** At university in the Kelly Morris Rm.
Sat.-Sun7-8 March		**Naracoote Caving Skills Weekend.** John Callison co-ordinating. Photography , surveying and SRT.
Tue 3rd April	6.30	**Annual General Meeting.** At university in the Kelly Morris Rm.
17 -20 April		**Flinders Rangers.** Easter Co-ordinator: Heiko Maurer 388-6685
Tue 5 May	6.30	**General Meeting.** At university in the Kelly Morris Rm. Talk on Fossils, Terry Readen S.A. Museum. (Tentative)
Sat.-Sun.16-17 May		**Naracoorte. Mapping.** Co-ordinator: Jenny Laidlaw 353-6018
Tue 2 June	6.30	General Meeting. Kelly Morris Rm.Talk on Old Homestead.
July. Date to be announced		Nullarbor trip. Nathan Co ordinating More details later.

There is to be SRT practice off the Uni foot bridge on Friday afternoons and an evening trip down to Sellecks Cave later in the semester. It will probably be mid week.

FOR YOUR LONG TERM PLANNING

New Year. 1992	ASF Conference: Tas - Trog 93. Tasmania Book your flight now while airfairs are cheap.
1993	International Speleo Conference in China.
31st Dec 1999	End of the Centuary

DON'T MISS ANY OF THEM!

If you want to attend any of the above trips ring the trip co-ordinator a week before the due trip date
New members are required to attend a meeting before coming on a trip.