



DECEMBER 1981

NO 147

MERRY CHRISTMAS

Merry Christmas and an Active New Year to all our Members.

1981 will no doubt be long remembered as our most historic year in the M.C.G. It was the year in which we finally moved in to our own cottage, for which we had worked and waited for so long. Moving in has been a great moral booster for the M.C.G. There has been a significant increase in caving activity, and a considerable increase in Membership. Which augurs well for the future.

Although there is still a lot to do on the cottage, and it may seem as though little progress is being made, it has to be realised that fitting out a cottage is a bigger task than it may first appear, and we are progressing slowly but surely.

1982 beckons with great expectations. Our digging activities are going well, and Tony and Greg are looking at possibilities for a club expedition in the summer.

1982 A.G.M. AND DINNER

The 1982 Annual General Meeting of the Mendip Caving Group will be held at Nordrach Cottage on Saturday afternoon on 27th March 1982. Tony Knibbs and myself will be supplying a Birthday Barrel at the meeting. The Annual Dinner will follow that evening at the Star in Wells.

Bryan Pittman

TREASURER

As reported last month Eric Dowley is to resign as Treasurer at the end of December. Arthur Spain has kindly agreed to be Co-opted Treasurer in Eric's place till the A.G.M. Arthur's address and telephone number is published in this newsletter as he will be taking up all new business immediately while Eric winds up our 1981 financial affairs.

SUBSCRIPTIONS 1982

1982 M.C.G. Membership Subscriptions are due from 1.1.82.

£10 for Full and Probationary Membership over 18 years of age.

£ 5 for Associate Membership, Member's Spouse, and Members under 18.

Eric says that some Members still have not filled in their 1981 Covenant forms. Will they please do so and return them to Eric as soon as possible as he cannot send them off to the Inland Revenue until he has had them all returned to him. Only then will we get the rebate!

MENDIP CAVING GROUP COMMITTEE

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CAVING ACCOMODATION MENDIP CAVING GROUP  
NORDRACH COTTAGE,  
CHARTERHOUSE - ON - MENDIP,  
BLAGDON,  
BRISTOL, BS18 6XW  
N.G.R. ST/5147.5605

GUEST BOOKINGS:- To be made with the Cottage Warden.

THURSDAY MEETINGS THE FOX & HOUNDS & MAWSON ARMS  
CHISWICK LANE SOUTH, LONDON, W.4.  
8.30P.M.

## COTTAGE BOOKINGS

### DECEMBER

11 Dave Gibson

18 MEMBERS WEEKEND

25 CHRISTMAS

### JANUARY

1 MEMBERS WEEKEND

8 MEMBERS WEEKEND

15 MEMBERS WEEKEND Martin Rowe's Birthday Barrel

23 Imperial College C.C.

29 Dave Gibson

### FEBRUARY

5 MEMBERS WEEKEND

12 Dave Hiyson

19 MEMBERS WEEKEND

### DUSTBINS

Please let the Committee know any time the council has not emptied the cottage dustbins.

### NORDRACH COTTAGE WORK OUTSTANDING DECEMBER 1981

LOUNGE Finish fire surround with quarry tiles  
Seal floor  
Remove old carpets (when car park completed)

STAIR CUPBOARD  
Finish lagging pipes  
Paint walls when dried out

CHANGING ROOM  
Add final coat of Paint (eggshell) to walls  
and all pipe work and basin brackets

SHOWER ROOM  
Add final coat of gloss paint to ceiling

LOBBY  
Paint walls (eggshell)

BEDROOMS  
Fit anti-roll boards to top bunks  
Lay lino tiles  
Fix bunks to walls.

ROOF SPACE  
Paint loft trap (gloss)  
Fit access ladder

LIBRARY  
Complete fitting of shelves  
Move books into library from bedroom

EXTERNAL  
Form shute below rainwater pipe at rear.  
Finish levelling car park and spread scalplings  
Erect Boundary Fencing  
Construct Soakaway

GENERAL  
Construct Rescue Gear Cupboard in Lobby  
Change stair carpet when car park completed  
Finish fitting Gas Solenoid to gas system  
Finish Battery Charger  
Install additional Heating

## THE TUNNEL OF EUPALINOS

During a recent Greek Holiday, on the island of Samos, I was interested to find out about one of the greatest technical achievements of ancient times.

The tunnel of Eupalinos was designed and executed by the renowned architect of that name in the 6th century B.C. and during the reign of Polycrates. The tunnel is an aqueduct of 1000 metres in length which was constructed to carry water from the springs of Ayiádhies in the north, through the 237 metres high mountain of Kastron, to the ancient city of Sames in the south. This city is now called Pythagorion after Pythagorus who lived on the island.

Thousands of workers slaved in the tunnel for many years, digging from both sides, until meeting face to face exactly in the centre of the mountain, with only a three metre deviation. These facts indicate that the necessary measurements were carried out with considerable mathematical accuracy.

The water was carried in a channel cut into a false floor in the tunnel. On the tunnel walls levelling lines were marked in red chalk and the markings for the construction sections have survived. The markings are in the form of a long vertical line with a section number and underneath the name of the supervisor, in archaic writing, running from right to left. Ten names have been found at a distance of 63 metres each. There are an unusual number of stonemasons' signs, these being, as yet, the oldest architectural proof of ligatures. Also of outstanding significance is a red chalk inscription on one of the first sections of the tunnel. In 30cm high letters and five metres long is the word ΠΑΡΑΔΕΓΜΑ. This simply spells paradigm in English and is the word paradigm in modern English use. Paradigm means example or pattern and in the tunnel it would have signified that this section was intended as a prototype for the remainder of the work. It is the oldest example yet of the Greek word for architectural model.

Pottery, clay lamps and gold coins have also been found during excavations of the tunnel.

On first visiting the tunnel I discovered that it was closed to the public but I noticed a smaller entrance about 30 metres away amongst some trees. I had no torch with me but poking my head into the entrance there seemed to be a good way ahead and a strong draught.

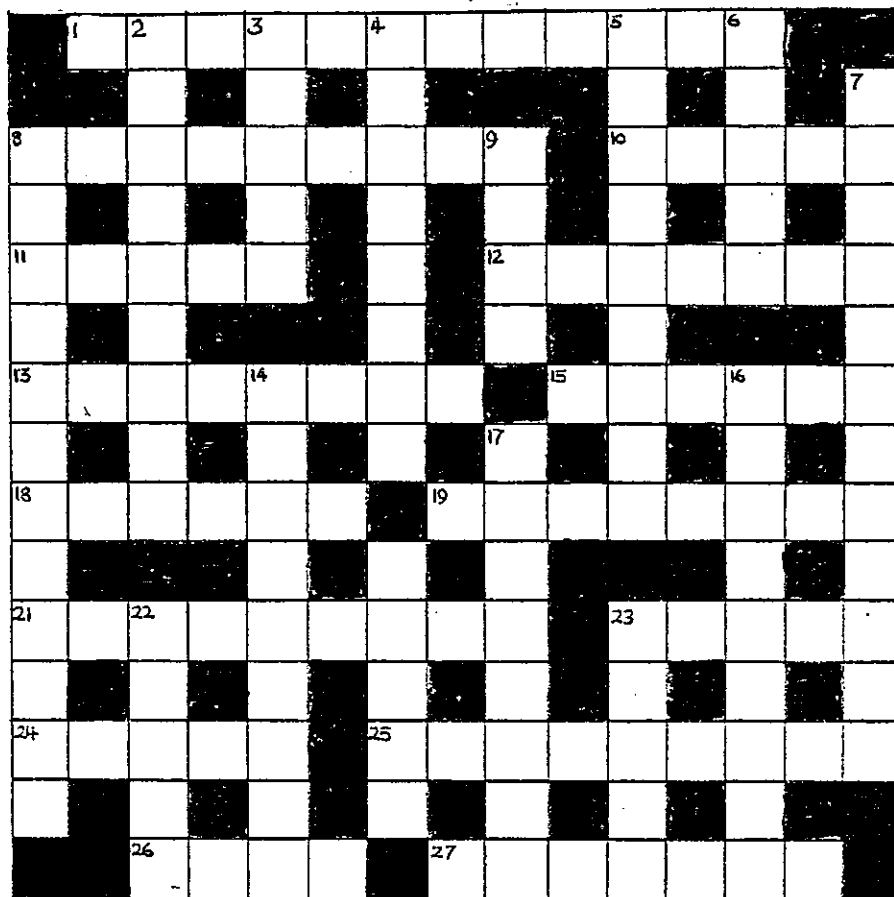
I returned one evening with young Chris and Paul, plus a torch. We walked the long mountain path to the entrance. On entering we were immediately impressed at finding a pointed shaped roof about 1.7 metres high. The walls were smooth and one metre apart. This smaller entrance tunnel soon joined a junction with the main entrance and here was evidence of excavation work and an electricity feed. The tunnel continued on, curving occasionally to the left and right. The false floor, made of sections of solid stone and with a 15 cm deep water channel, had collapsed in a few places making progress rather slow as it meant we had to scramble up and down from the original tunnel floor level. As we only had one torch amongst us the climbing was rather tedious. Every thirty metres or so a round stone lined ventilation shaft led up to the darkening Aegean sky. Parts of the tunnel roof had collapsed in places but the route ahead was always just possible with a bit of a squeeze. Apparently the complete length of tunnel is not passable due to a complete collapse of the roof. We were not to find this out for ourselves however as the boys were getting a little anxious and I decided to get out while the going was good. After all with only one torch who knows what could happen.....

John Pudduck

BRIAN TERRY'S CAVING CROSSWORD

Brian will buy the first Member to send him a correctly completed crossword Three Pints of Beer!

Send your entry to :- B. Terry, 54 Brunswick Crescent, New Southgate, London, N11 1EB



CAVING CROSSWORD CLUES

ACROSS

- 1 Leap each Dell in Yorkshire! (6,2,4,)
- 8 Team fusing together without direction, disinfects and cleanses (9)
- 10 Makes a blend to obtain heraldic colour (5)
- 11 Seek to remove errors in text, in what may seem endless job. (5)
- 12 One Middle Eastern formation in Lancaster (7)
- 13 Pout face for refreshing drink. (3,2,3.)
- 15 Cessack, Minus one hundred, for a cave in Littendale (6)
- 18 Climbing Aids - Foolish to snip! (6)
- 19 A judge would use this to terminate a sentence (4,4)
- 21 Liens mete out material essential for cave formation. (9)
- 23 A light growing gradually smaller at the end (5)
- 24 Part of this creed is common on mountainsides (5)
- 25 The sort of pay a surgeon gets for amputation? (9)
- 26 Headless bird goes up in the caving world (4)
- 27 Ate coin to get poison from Monkshood (7)

DOWN

- 2 Beat utensil on Fountains Fell? (6,3)
- 3 What all books are. (5)
- 4 Confused, Ted Tiler scattered rubbish (8)
- 5 Descriptive of poisonous substance (9)
- 6 Topsy Turvy thief without right forms a gorge (5)
- 7 Mendip Village. (4,8)
- 8 Finish of two nations (6,6)
- 9 Engine part found in some systems (4)
- 14 Weather report area (Finer site perhaps?) (9)
- 16 One thing to do with the first part of 5 down (3,4,2)
- 17 Abbreviated Royalty on Mendip (5,3)
- 20 Care must be taken when boulder chokes are in this condition (5)
- 22 Another name for 'The Black Chasm - Khazad Dûm'(Tolkien) (5)
- 23 Italian City (5)



# CAVING SHOP

FOR ALL CAVING BOARDSAILING  
AND MOUNTAINEERING NEEDS

Double skinned neoprene approximately 4mm thick, each sheet £  
(About two and a half sheets required for each wetsuit) 7.50

## WETSUITS

One piece single or double lined

## VERY CHEAP

Ladies Double Lined 4-5mm Wetsuits 33.00

## SLEEPING BAGS

Down filled Sleeping Bags

Holofill Sleeping Bags

Sleeping Bag Liners (Just what you need till the cottage is fitted  
with central heating!)

## DIVETS

## EQUIPMENT

Ladders and Belays

Viking 10mm or 11mm Nylon Lifeline

Abseiling/Prussiking Ropes and Equipment

## BOOKS

Geology of The Peak District 2.00

British Caves and Potholes. by Deakin 4.95

Caving and Potholing by Judson 1.95

Carlsbad Caves and a Camera 5.25

Speleology The study of Caves 2.95

Caving Manual . Lovelock 7.95

The Darkness Beckons. by M. Farr 10.50

Down to a Sunless Sea. by Boon 8.50

Odd volumes of Caxtons Encyclopaedias 60p

Childrens Encyclopaedias 60p

249 FELTHAM HILL ROAD, ASHFORD, MIDDLESEX.

TEL. ASHFORD (69) 52643

31 SPRING LANE, HEMEL HEMPSTEAD, HERTS.

TEL. 0442 42029

## LIQUID PETROLEUM GAS:- CHARACTERISTICS, HAZARDS, HANDLING, AND STORAGE.

Liquidified petroleum gases are hydrocarbon gases of which butane and propane are the two with which most people are familiar; e.g. "Calor" gas. The following notes provide a general guide to the characteristics, hazards, and safe practice in storing L.P.G. in cylinders.

### CHARACTERISTICS AND HAZARDS

At normal atmospheric temperature and pressure L.P.G. exists as a gas; but it is supplied as a liquid under pressure in the cylinders - 1 litre of liquid is equivalent to about 250 litres of gas.

The most commonly used L.P.G.s are "commercial butane" and "commercial propane". L.P.G. is colourless and weighs about half of an equivalent volume of water. The vapour is heavier than air, and will therefore tend to fall to low level and flow along the ground into drains, cellars, and other low lying places.

When mixed with air in a proportion between (approximately) 2% and 10%, a flammable vapour/air mixture is formed. In a confined space, ignition of this mixture will cause an explosion. As it is heavier than air, a vapour/air mixture arising from leakage may be ignited some distance away; the resulting flame may travel back to the point of leakage. An empty L.P.G. cylinder will still contain vapour. Never leave the cylinder valve open - air will diffuse into the cylinder and may form a dangerous vapour/air mixture.

L.P.G. is normally odourised before distribution, so a leakage may be detected by smell before a flammable vapour/air mixture is reached. Tests for leakage should be made by brushing the suspect area with soapy water. Leakage may also be detected by the cooling effect of the liquid around the point of leakage - condensation and even freezing of the water vapour in air may occur. **UNDER NO CIRCUMSTANCES SHOULD A LIGHTED MATCH OR OTHER NAKED FLAMES BE USED TO TRACE A POINT OF LEAKAGE.**

If brought into contact with the skin, liquid L.P.G. will cause severe frost burns due to the rapid evaporation that takes place. The gas also has anaesthetic properties which may be dangerous at higher concentrations.

### STORAGE

Any storage should be readily accessible by emergency services in the event of an emergency. Separation distances from buildings, etc, vary according to the quantity stored - full details are in the Guidance Note (see last paragraph).

In the open air L.P.G. cylinders may be stored with other cylinders whose contents are flammable, or inert; but they must be at least 10 feet from cylinders containing oxygen, or toxic/corrosive materials. If L.P.G. cylinders are to be stored in the vicinity of liquid oxygen, or other hazardous substances, specialist advice on spacing should be obtained.

A building, or part of one, to be used for the storage of L.P.G. cylinders should be purpose designed or modified to ensure good fire resistance and a high rate of ventilation. Cylinders should never be stored in drains, cellars, basements or elsewhere below ground level. Especially outside, all storage areas must be kept clear of grass, weeds, and other combustible materials.

Cylinders should always be stored with the valves uppermost - regardless of whether they are full or empty - unless they are designed otherwise. In practice this normally means keeping the cylinder upright.

**IMPORTANT** All storage places, and any enclosed places where L.P.G. is temporarily kept, should be marked with a conspicuous sign at the entrance to indicate the presence of L.P.G. **SMOKING MUST BE PROHIBITED IN THE STORAGE AREA. NAKED FLAMES MUST NOT BE ALLOWED IN, OR ADJACENT TO IT. WARNING NOTICES SHOULD BE DISPLAYED.**

#### HANDLING

Cylinders should not be dropped or allowed to come into violent contact with one another, or any adjacent object. Cylinders with damaged valves or threads should be labelled appropriately and returned to the suppliers as soon as possible. Suitable hard standing should be provided for the receipt and dispatch of cylinders.

#### FIRE FIGHTING

A clearly recognised emergency procedure should be established and understood by all concerned with handling L.P.G. In the event of a leakage of gas becoming ignited it should only be extinguished by closing the valve or plugging the leak. No attempt should be made to extinguish the flame in any way, but provided it is safe to do so, the cylinder should be cooled by cautious spraying with water. The person directing the spray should take up a position where he will be protected should the cylinder explode. In the event of fire occurring, inform the Fire Service immediately.

#### CONCLUSION

The above is printed as general guidance on L.P.G. For fuller information refer to Guidance Note C.S.4 "The Keeping of L.P.G. in Cylinders and Similar Containers", published by the Health and Safety Executive, obtainable from HMSO, reference number ISBN 0 11 883373 1. This also contains details about cylinder construction, charging and fire protection requirements.

#### UBLEY HILL POT

Martin Rowe and Ian McKechnie have volunteered to supervise the capping of Ubley. Geoff Barton has offered to act as Mechanical Adviser. Anyone interested please contact any of these three

#### VARTA BATTERIES

These automotive batteries are still available to M.C.G. Members at 50% off list price. Contact Bruce on 01 848 3340. Bruce is still taking orders for Christmas drinks.